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THE EDUCATION OF THE BLIND

A SURVEY

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THE EDUCATION OF THE BLIND

A SURVEY

Being the Report of the Joint Committee
of
The College of Teachers of the Blind
and
The National Institute for the Blind

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PREFATORY NOTE

The labours which find their completion in the publication of this Report owed their inception to the late Dr. Eichholz. After a busy life in the Board of Education he had retired in 1930, but continued his work for the handicapped sections of the community by carrying out for the Board an exhaustive survey of social and educational conditions among the deaf. He had already joined the Governing Body of the National Institute for the Blind and turned with unabated energy from his work for the deaf to the idea of a detailed investigation into the education of the blind. With promise of financial support from that body he sought the co-operation of the College of Teachers of the Blind. I remember well his enthusiastic description of what should be attempted when he called to see me on the subject in December of 1930.

The project was not new to the College, for in 1927 I had secured the voluntary help of Mr. (now Dr.) Frank Earle in an endeavour to secure scientific data concerning the mental life of blind children. Sixty teachers attended a course of instruction by Mr. Earle with the object of enabling them to apply intelligence tests to the pupils of their own schools.

Unfortunately, this promising beginning had to be left unfinished owing to the transfer of Mr. Earle to Scotland. A good deal of material had been collected, but no synthesis or deductions had been made. It was clear, however, that the College would welcome the renewal of any such investigations. Teachers were conscious that while their work was based on general pedagogical principles, the adaptation of these principles to the teaching of blind children was almost entirely empirical. That was not to say that current methods and deductions were inaccurate, but the fact remained that they were not based on the results of scientific inquiry. Was it possible by modern methods of testing and analysis to discover in what way and to what extent the mind of a blind child had been affected by his handicap ? What was the difference between the thought process of a person born blind and that of one who could see ? Was the level of native intelligence in a blind child accurately comparable with that of a seeing child of the same age ? Did blindness bring about retardation in native intelligence or only in the acquirement of knowledge ? If a scientific inquiry of this kind showed the nature and degree of mental variation, what modifications would in turn be demanded in curriculum and classroom method ?

Apart from Mr. Earle's unfinished work and some pioneer efforts by Dr. Drummond twenty years ago in the construction of a scale for blind children, little had been done in this country, and I assured Dr. Eichholz that the College and the large body of teachers for whom it stood would welcome with eagerness any such design. What made the plan feasible was the generous action of the National Institute in offering to finance the enterprise. The thanks of the Committee are also due to the Clothworkers' Company which most generously made a grant to cover the cost of the survey into the state of physical education in a number of schools, carried out by Dr. Broman and Miss Vulliamy.

A Conference between representatives of the College and the National Institute took place in January 1931, and the instrument of a Joint Committee was agreed upon. The first four members from the College were Miss Garaway, Miss Falconer, Mr. Evans and myself, and the N.I.B. appointed Dr. Eichholz and Dr. Whitfield. The Board of Education, who were keenly interested, appointed Mr.

Lavender from their Inspectorate, and Dr. Underwood from their Medical Branch. Sir Percy Nunn, who was asked to nominate a member who would bring to the deliberations of the Committee wide knowledge and practical experience of general education, suggested Mr. J. S. Ross, of Westminster Training College, who was in due course appointed. The Ministry of Health, whose Central Department for the Welfare of the Blind included among its duties the oversight of the employable blind, realized the influence on that work of efficient technical training and appointed Mr. Lovett, who was a regular attender of our meetings till his death in October 1935.

The Committee met for the first time on 25th September, 1931, when Dr. Eichholz was appointed Chairman and Miss Garaway, Secretary. The National Institute for the Blind kindly offered the services of Miss Thomas to help Miss Garaway, and Miss Thomas was accordingly appointed Assistant Secretary and Mr. Eagar was added to the Committee as an official member.

In the four and a half years which have elapsed since that first meeting the changes in the personnel of the Committee have naturally been considerable. In its first two years of life, the Committee was strengthened by the appointment of three additional members. These were Dr. Dowdell, Lecturer at St. John's College, Oxford, who joined in December 1931, Mr. Stone, who had retired from the Royal School for the Blind, Edinburgh, to live in London, in February 1933, and Mr. Turnbull, of the Board of Education, in the same month.

In February 1933, the Committee suffered a grave loss in the death of its Chairman. For fifteen months Dr. Eichholz had conducted its meetings with admirable skill and authority. His ingenuity in eliciting facts and opinions from witnesses, his tactfulness and geniality, his unfailing kindliness and zest had made him an ideal Chairman. His death was a personal sorrow to every member of the Committee. In June 1933, the Committee suffered a second loss by the resignation through ill-health, fortunately temporary, of its most capable Secretary. Miss Garaway had contributed much from her exceptional knowledge and experience and had laboured strenuously in the compilation of Minutes and Reports. It was a matter of deep regret to her colleagues that she had to give up this important line of work. Mr. Stone was appointed in her place and Miss Thomas promoted to act in partnership with him. To Miss Thomas the Committee are deeply indebted. Her skill has been of the greatest assistance to us all. Her cheerful industry and accuracy in detail made us increasingly dependent upon her, and on a multitude of occasions substantially lightened our labours. The vacancy caused by Dr. Eichholz's death was filled by Mr. W. H. Brown. A year later Mr. Brown resigned and his place was taken by Mr. Purse. Mr. S. E. Stevens was nominated by the College to fill the vacancy created by Miss Garaway's resignation.

One of the first things the Committee did was to appoint a psychologist who it was hoped would make a study of as large a number of blind children as possible and guide the Committee towards an answer to some of the questions stated above. Our psychologist spent nine months in collecting statistics of intelligence quotients, and in making detailed studies of pupils both above and below the normal level. Unfortunately, the results were disappointing; perhaps because of the wide range of problems involved and the great difficulties inherent in them, no clarifying generalizations could be deduced from his reports and no qualitative estimate of the mental life of a blind child was forthcoming. This result, perhaps inevitable and certainly regrettable, made a substantial difference to the programme of the Committee. Its province became one of survey rather than of research.

In comparison with the time spent by the Committee on its labours the Report is short. As one would say in arithmetic, only the result and not the working has been shown. All the same, the working had to be done, and the Committee is grateful to the men and women who as witnesses contributed so freely to our store by means of written documents and verbal discussions. The value of our Report is for others to determine. The hope of the Committee is that it will appeal to more than one type of student. It should be of substantial service to the teacher of blind children both by enlarging his conception of his vocation and by giving practical advice on all aspects of his day-to-day routine. It should assist the student of education in general as an authoritative survey of one particular domain. It should furnish to the foreign reader a conspectus of the education of the blind in this country hitherto unobtainable in a single volume, and here and there it may even appeal to the general reader by providing him with a description and estimate of a little-known field of social endeavour in the life of the nation.

J. M. RITCHIE.

HAMPSTEAD.
May, 1936.

MEMBERS OF THE COMMITTEE

Representatives of the College of Teachers of the Blind

E. Evans, Esq., East Anglian School for Blind and Deaf Children.

Miss J. I. Falconer, O.B.E., Birmingham Royal Institution for the Blind.

Miss M. M. R. Garaway, Secretary 1931—1933. *Resigned June* 1933.

J. M. Ritchie, Esq., M.A., Ph.D., London Society for Teaching and Training the Blind. Chairman.

S. E. Stevens, Esq., School for the Indigent Blind, Liverpool. *Elected July* 1933.

Representatives of the National Institute for the Blind

W. H. Brown, Esq. March 1933–June 1934.

A. Eichholz, Esq., M.D., C.B.E. Chairman, September 1931–February 1933. *Died February* 1933.

B. Purse, Esq. *Elected June* 1934.

E. Whitfield, Esq., B.Sc., Ph.D. Vice-Chairman.

Co-opted Members

Mrs. Carter, Kendon Street L.C.C. School. October 1931–April 1932.

E. G. Dowdell, Esq., M.A., D.Phil. *Elected November* 1931.

Miss Lloyd Evans, Furzedown Training College. April 1932–May 1935.

J. S. Ross, Esq., B.Sc. Westminster Training College. *Elected October* 1931.

W. M. Stone, Esq., F.E.I.S., Royal Normal College for the Blind. Joint Secretary. *Elected June* 1933.

Served upon the Committee in an official capacity

W. McG. Eagar, Esq., B.A. Secretary-General, National Institute for the Blind.

P. Lavender, Esq., H.M. Inspector. Board of Education.

F. R. Lovett, Esq., M.B.E. Ministry of Health. *Died October* 1935.

E. L. Turnbull, Esq. Board of Education. *Elected March* 1933.

J. E. A. Underwood, Esq., M.B., B.Sc., D.P.H. Medical Branch, Board of Education.

SYNOPSIS OF THE REPORT

PART I. ADMINISTRATIVE

1. HISTORY AND SURVEY.

Beginnings of the education of the blind. Introduction of Braille. Royal Commission on the Blind and Deaf (1885). Elementary Education (Blind and Deaf Children) Act, 1893. Local Education Authorities. Inspection of Schools. College of Teachers of the Blind.

Conspectus of present position in relation to (*a*) pre-school child, (*b*) normal blind child between ages of 5 and 16, (*c*) talented child, (*d*) retarded child, (*e*) trainee. School of the future ; two suggested schemes.

2. RECRUITMENT AND TRAINING OF TEACHERS.

Difficulties of recruitment. How far is present system satisfactory ? Requirement of further period of specialized training impracticable. Short courses for teachers of the blind desirable. The place of the blind teacher, and length of training recommended.

3. ASCERTAINMENT OF BLIND CHILDREN.

Three types of children certifiable as blind under Education Act 1921. Present Report primarily concerned with children who cannot be taught by methods involving use of sight. Importance of co-operation between Local Education Authority, Blind Persons Act Authority, and voluntary societies for the blind. Difference of definition of blindness under Education Act and Blind Persons Act. Form 37 D and Circular 1431. Definition in ophthalmic terms of children who should be admitted to schools for the blind. Importance of periodical ophthalmic examination of children in schools for the blind.

4. DOUBLY DEFECTIVE CHILDREN.

1. *Blind and Mentally Defective Children.* Classification of mentally defective children as (*a*) ineducable (idiots and imbeciles), (*b*) educable (feeble-minded, dull, and morally defective). Application of Intelligence Tests ; need for further research. Borderline cases. The dull or " less retarded " child. Permanent retardation contrasted with educational backwardness of remedial kind.

Importance of prolonged observation before child is sent to special school. Existing provision for retarded children at Court Grange, Abbotskerswell. 2. *Epileptic Children.* Problem small; no immediate action likely. 3. *Deaf-blind Children.* Statistical note. Technique to be followed determined by acquirement of speech or language. Special school impracticable, even if educationally desirable. Provision at Penn. 4. *Other Physical Defects.*

PART II. GENERAL CONSIDERATIONS

PREFATORY NOTE.

1. THE AIM OF EDUCATION.

Education of the blind part of larger problem of preparing all the young to take their place in the world. Definition of education as art of employing experience to fashion modes of feeling, thinking and action that conform to highest standards of human value. Focal point of education during last generation the individual child, rather than the child in relation to society. Great advance in technique of teaching, in which teachers of the blind have shared. Ultimate test of education to be found in realm of values, social and personal.

2. CONCERNING EXPERIENCE.

Work of teacher to provide children with succession of experiences, and to enable them to use experiences that come to them so that they may give rise to organized body of knowledge adapted to purposes of life. Danger of formalism divorced from experience. Seeing child's pre-school store of experiences wider than that of the blind; therefore specially important that teachers of the blind shall try to give their pupils variety of first-hand experiences in school life, and train them also to seek own experiences, even in face of certain risks. Three elements of experience, i.e. feeling, thought, action, each to be considered in turn.

3. THE WORLD OF EMOTION.

Importance of the emotional tone of experience. Consequent need for educational atmosphere conducive to harmonious emotional life. Effect of blindness on emotional endowment; blindness probably exaggerates effects of inborn emotional tendencies. Duty of teacher to watch signs of emotional development. Origin of emotional states examined; probable that emotional displays are most marked when man's natural activities are thwarted; this may explain why blind children are more subject than the seeing to extremes of emotion. Teacher should be liberator, encouraging all-round activity. Importance of right social relationships. Value of natural intercourse between blind and seeing. Teachers as representatives of seeing world. Discussion of alleged emotional crisis in lives of blind adolescents, and teacher's proper attitude towards it. Æsthetic training of blind child.

4. THE WORLD OF THOUGHT.

Emotion may determine ends pursued, but knowledge gives power to pursue them. Does blindness affect native intelligence ? Application of Intelligence Tests, even when adapted for the blind, does not answer the question. No *a priori* reason to think blindness entails impairment of intellectual powers, except when associated with certain diseases ; it does, however, limit sphere in which intelligence may work, and makes acquisition of knowledge more difficult. Little value in trying to institute exact comparison between degree of intelligence of blind and seeing ; our concern rather to show how intelligence of the blind may best be developed. Case-studies of growth of mental powers of blind children would be more valuable form of research than tabulation of intelligence quotients. Two facts established as to intelligence of blind : (*a*) Wide range of individual mental characteristics, (*b*) Larger preponderance of retarded children in blind school population than in seeing. In this direction, Intelligence Tests, adapted for use in the case of the blind, may prove valuable. Importance of training blind children to think towards specific ends, to plan so as to face unexpected contingencies. Three essentials of such thinking :

(*a*) Previous experience similar to that now presented.
(*b*) Understanding of associations between various factors of past and present experiences.
(*c*) Power to bring past and present experiences into harmonious relationship.

Probably no fundamental difference between thought processes of blind and seeing, except for differences of imagery. Question of imagery theoretically interesting, but not of great importance to the teacher. To him, problems of language of more immediate concern. Blind have to use language evolved to suit usages of seeing world ; consequent unreality may be source of danger to teacher and taught. Verbalism discussed ; tendency to overestimate its dangers. All verbal knowledge not worthless. What teacher must ask of blind pupils is " intellectual honesty that . . . insists on definitions of ideas in terms clearly comprehensible to themselves."

5. THE WORLD OF ACTION.

This particularly important to educationist. Limitations of blindness upon physical activities ; blind tend to be less mobile than the seeing, more cautious, more at mercy of casual disturbances. School should present them with environment well stocked with all that will appeal to their senses, help them to satisfy creative impulses, aim at high degree of physical fitness, instil sense of order, and set before them ideal of service.

Importance of material environment ; many and varied opportunities must be brought within school walls. Place of domestic activities. Indoor recreation. Training in social accomplishments and everyday activities. Skilled activities must be combined and organized, so that they become part of the life-activities of the individual. Training for active life through provision of experiences by means of which separate activities can be combined into purposeful wholes. Methods will include dramatic play, outdoor games, hobbies, Group and Club activities. Place of self-government and self-direction. Interests and habits of work acquired at school should be carried over into training period. Limitations of blindness should not prevent blind from finding way of life worth living.

PART III. EDUCATION AT VARIOUS STAGES

1. The Curriculum : An Introduction.

Two possible standpoints :

Either (1) Knowledge and experience of human race considered, and attempt made to epitomize it in life of the child ;

or (2) School curriculum developed from interests and activities of child himself.

These views, however, complementary, rather than opposed.

First standpoint, as expounded by Sir Percy Nunn :

Typical activities of man fall into two groups :

1. Safeguards of individual and social life ; e.g. care of body, morals, religion. These cannot be treated as "subjects."
2. Creative activities. Education must include Literature, Art, Handicraft, Science.

Similar conclusion reached if analysis is based on threefold division of experience into doing, thinking, feeling.

What man does : major crafts, tool crafts, decorative arts.
What man thinks : language and literature, mathematics, science, history, geography.
What man feels : music, poetry, art.

Second standpoint, as expounded by Professor Dewey :

Child the centre ; school regarded as life, rather than merely preparation for life. Protest against formalism. Learning active, not passive. Fourfold interests in conversation, inquiry, construction, artistic expression, form basis of curriculum. Arts of reading, writing and counting needed to follow out these interests, and regarded as tools, not as ends in themselves. Child to be given material for first-hand experience and activity. Basis of curriculum shifted from subject-matter to realities of life. Comparison of school with ideal home. Doctrine wholesome, though open to criticism that child activity should not be regarded merely as end in itself. Formal education has its place, though this must be subsidiary in early stages. Analysis of experience by teacher must involve certain separation into "subjects."

Blind child, like seeing, seeker of experience; special problem in his case how to mitigate handicap of blindness. Ideal goal of curriculum, i.e. epitomizing best achievements of human spirit may be impossible in case of many blind children, and therefore doctrine of Dewey may usefully be stressed in schools for the blind. Curriculum should be based on activities, and in early stages be informal. Child's future career must, however, later to some extent determine the content of his instruction.

2. The Pre-School Child.

Maternity and Child Welfare Act, 1918. Ascertainment of eye defects. Importance of co-operation between Maternity and Child Welfare Authority and Local Education Authority. Child's own home normally best place for him up to 5 years of age. Work of home teacher in relation to child who remains in own home. Sunshine Homes. Objects of the Nursery School. The School environment: (*a*) Schoolroom, (*b*) Garden, (*c*) Playground, (*d*) Washing and Dressing accommodation, (*e*) The daily programme, (*f*) Health of the pre-school child.

3. The Infant School.

Introduction. Characteristics of age period 5 to 7 plus. Genera aims of the Infant School. Types of Children in Infant Schools: (1) Children from Nursery Schools, (2) Children from home, (3) Retarded children, (4) Late admissions, (5) Precocious children. Buildings and Equipment. Organization. Development of the Child: (1) Sensory Training, (2) Physical Activities, (3) Intellectual Activities. Handwork in the Infant School. Teaching of Braille.

4. The Five Years from 9 to 14.

Characteristics of period; increased self-control, power of judgment, and sense of values.

In selection of material for curriculum, predominant consideration must be value to the child as blind, and usefulness as preparation for full adult life. Curriculum must be based on activities. Blind child's activities more circumscribed than those of the seeing. Place of "everyday knowledge" to help blind child to take place in seeing world. Departures from normal in direction of retardation or peculiarity make elasticity in curriculum important.

Subjects of Curriculum.

English. Place of reading.

History.

Geography. Maps and apparatus. Human aspect of subject to be stressed.

Arithmetic. Value and limitations of Taylor Frame. Place of mental arithmetic.

Nature Knowledge. Place of experimental work. Reality in instruction, and conformity to conventions of external world. Nature study to lead to beginnings of instruction in general elementary science.

Handwork. Manual dexterity not limited to handwork room, but pervading function of school life. Relation to æsthetics. Variety in handwork. Woodwork.

Square handwriting.

Music. Its importance in schools for the blind. Class singing. Piano should not be only instrument taught. Age for beginning music-lessons. Musical appreciation. History of music.

5. Age Period 14–16.

Future of child now a matter for consideration; education must take on more practical aspect, though over-specialization must be guarded against. Education of those who are to take up music as a career. Period must be marked by elasticity in curriculum. Freedom and opportunity for self-government to be given. Importance of expression of thought. Value of debating societies, Scout and Guide movements. Curriculum to include commercial arithmetic, elementary book-keeping, typewriting, housewifery, laundry, cookery, physiology and hygiene. Æsthetic influences. School library. Importance of cultivating good manners. Discipline. Recreation and training for leisure. Emotional tone of adolescence. Strain of blindness, and possible effect of its limitations on character. The school and the home.

PART IV. CONTINUATION COURSES

1. Vocational Training.

Education of the blind characterized by continuity from childhood to maturity. Trades for which training is given. Length of training for the adolescent; preparation for life as well as livelihood. Factors governing choice of trade:

(*a*) Pupil's aptitude.
(*b*) Power of absorption by the trade.
(*c*) Home circumstances.

Importance of co-operation between training centre, parents, L.E.A., County Association for the blind and future workshop or home workers' scheme. Progress Reports. Possibility of National Diploma for blind students in industrial occupations discussed. London scheme described. Syllabus in recognized courses. Craft Instructors' Diploma.

2. NON-VOCATIONAL TRAINING.

From 16 *to* 20.

Importance of adequate provision for non-vocational courses for all trainees under 20 years of age. Place of semi-recreational activities and hobbies.

General considerations governing curriculum:

1. Work must not be closely allied to vocational course. Bias should be towards mental development, but crafts should not necessarily be excluded.
2. Previous educational experience must be used as foundation, but forward-looking attitude essential. Value of independent work.
3. Course should appeal to rational or æsthetic interests of the students, and give scope for initiative.

Particular Subjects, which may be included in Curriculum.

English Literature. Object to cultivate appreciation and develop criticism.
Foreign Languages. Living language should be chosen.
Music. Should include singing and musical appreciation.
History.
Geography.
Mathematics and Science.
Economics and Psychology.
Civics. Importance of knowledge of central and local government.

If manual work is included in non-vocational course, it must be from non-vocational standpoint.

Physical training; no diminution should occur in provision of suitable activity. Organized games, swimming, folk dancing.

Non-Vocational Training of Adults.

Although compulsory non-vocational training of adults impracticable and undesirable, important that facilities for such training should be offered. Braille, typewriting, and cultural pursuits to be included. Place of Wireless Discussion Groups. Suggested attendance at courses organized by Workers' Educational Association and kindred bodies.

PART V. HEALTH AND PHYSICAL EDUCATION

1. The Health of the School Child.

Subject considered under four heads:

1. General Maintenance of Health.
2. Medical Provisions.
3. Practice of Hygiene.
4. Sex Education.

General Maintenance of Health.

(*a*) Site and premises.
(*b*) Equipment. Every school should have Medical Officer's room, and every resident school adequate hospital provision. Value of small dormitories.
(*c*) Dietary. Tendency of blind child to be lethargic. Importance of fruit, fresh vegetables, milk. Recommendations from Ministry of Health Report on Diets in Poor Law Children's Homes.
(*d*) Clothing.

Medical Provisions.

Work of medical staff. Care of teeth and eyes. Medical Records.

Practice of Hygiene.

Personal and domestic hygiene. Cross-reference to hygiene as schoolroom subject.

Sex Education.

Twofold object of such education: knowledge, and healthy attitude to life. Recommendations of Committee on Sex Instruction set up by L.C.C. quoted. Divergent opinions on class-instruction. Blindness and sex-knowledge. Healthy interests. Social aspect of sex.

2. Physical Education.

Tendency to lack of vitality in blind children, because they lack stimulus of sight.

Report on physical education of the blind by Miss Vulliamy and Dr. Broman given in Appendix. Their analysis of postural defects among the blind. Extracts from their Report on visits to specific schools.

General conclusions of the Committee:

1. Physical education concerned with whole physical life, including diet, sleep, clothing, posture in class, exercise and games. Two consequences:
   (*a*) Physical training only part, though important part, of problem of physical education.
   (*b*) Physical well-being of children requires co-operation of physical training teacher, school doctor, school matron, orthopædic consultant, and all members of school teaching staff.
2. Only fully-trained Physical Training teacher should give remedial exercises, or have full use of apparatus. Work of untrained teacher should be confined to organization of games, and simple activity exercises.
3. Ideal would be fully trained teacher in all schools. Where this is impossible, facilities should be given to partially trained to attend special short courses.
4. Tendency to give physical training along too formal lines. Importance of good posture.
5. Time given to physical training should be not less than 100 minutes weekly, with games and general activities.
6. Importance of organized games.
7. Ideal environment for physical education set out. School and workshop furniture.
8. Need of physical training for the adolescent.
9. Importance of physical records.
10. Opportunities for exercise during holiday periods.

PART VI. MISCELLANEOUS

1. Co-Education.

Co-education occasionally adopted in schools for the blind for administrative, rather than educational reasons. Educational reasons for and against it are, however, all that is relevant in present Report. Committee has not reached unanimous conclusion on the question.

Supporters argue that life is lived in two-sexed world, and if education is preparation for life collaboration between sexes should begin in healthy environment of good school. Probable that close contact between sexes at school makes for healthy and intelligent relationship.

Strong case for co-education on general grounds, but several practical difficulties:

1. School consisting of members of one sex can reach higher level of intensity and organic unity. Stronger corporate spirit.

2. Relationship between teacher and taught more satisfactory in school where both are of same sex.
3. Discipline less easy to maintain in co-education school.
4. Time-tables more difficult to arrange in such a school.
5. Co-education imposes additional responsibilities on those in charge of out-of-school activities.
6. Objection that co-education may lead to intermarriage of blind persons sometimes over-emphasized, but difficulties involved in such marriages should be made clear to all contemplating such a union. Argument less relevant in school than in training centres.

2. PROBLEMS OF LATER SCHOOL LIFE.

Intercourse with the seeing. Influence of segregation. Teacher's part in fitting pupils for transition to seeing society. Social value of "verbal knowledge." Social activities which may be shared with the seeing. Private pursuits and interests. Duty of teacher to encourage pursuits that can be carried over into adult life. School and pupil's future career. Economic independence the ideal. Legitimate place of subsidized employment in scheme of blind welfare, if it does not kill idea of independence. School as preparation for good life.

3. THE BLIND CHILD IN SCHOOLS FOR THE SEEING.

The Special School. How far is policy of providing for education of exceptional children with normal applicable in case of the blind ? Practice of educating blind and seeing together in America described, with special reference to Braille classes at Cleveland, Ohio.

Fact of Hadow reorganization of schools combined with small proportion of blind children to seeing would make education of the blind child with the seeing in this country matter of considerable administrative difficulty.

Two main arguments of advocates of system :

1. Child remains in home environment.
2. Child comes into contact with life of ordinary school, and gains social and educational advantages thereby.

First argument two-sided. Home not always satisfactory environment. Second offset by certain serious objections. Danger of imposing educational ideals of the seeing on the blind. Isolation of Braille reading and writing as "subjects" artificial. Teacher cannot continually adapt language and methods to suit blind minority. Few facilities for "blind" handicrafts in schools for the seeing.

Strength of position of those who advocate education of the blind with the seeing lies in dangers of institutionalism and segregation ; but these dangers may be overcome by out-of-school activities shared with seeing.

4. The Exceptional Child.

(*a*) *The Retarded Child.* Principles upon which teacher should deal with dull children who remain in ordinary school. Education must be founded upon their positive individual interests, and these interests brought into relationship with normal activities of the school. Main difficulty of dealing with dull child in ordinary school that of classification. As far as possible, child should be with those of his own age. Place of the special class for retarded children. Subjects of instruction. Increased elasticity in school organization of value in dealing with these children.

(*b*) *The Talented Child.* Within certain limits, talented blind child able to hold his own with the seeing. Careers open to well-educated blind person discussed under two headings : hopeful and less hopeful.

Hopeful.
1. *Music.*
2. *Commercial life.* Typing, shorthand, telephony, business.
3. *Massage.*
4. *Piano-tuning.*
5. *Broadcasting.*

Less hopeful.
1. *Church.*
2. *Law.*
3. *Teaching.*

5. Selection for Secondary and University Education.

Provision for education of intelligent child below secondary school standard considered in relation to Hadow Report.

Strong case for provision of secondary education for all capable of benefiting thereby. Certain practical difficulties :

1. Uncertainty whether adequate grants will be forthcoming.

But although L.E.A. does not meet full cost, charitable funds will generally make up the deficiency.

2. Lack of knowledge of openings available at end of school career. Tendency of parents to choose comparative safety of elementary school/training centre/manual occupation cycle, rather than risk uncertainty of professional career.

Desirable that there should be further research into potentialities of the blind.

3. Obstacles to advancement latent in candidate's social environment.

Against this, many blind children from poor homes have secured positions of independence after secondary education.

Problem of blind child who has to take up manual occupation after secondary education. Dignity of all forms of work to be stressed. Importance of realist outlook at secondary schools for the blind. After-careers of those who have attended secondary schools. Blind children at secondary schools for the seeing.

University education for the blind. Case for expenditure of public funds only justifiable when candidate has definite prospects of professional opening at close of career and personal qualities of high order.

6. Provision of Braille Books.

Braille book-production in Great Britain; books sold at price which represents only fraction of cost of production. British system compared with that followed in U.S.A., where speculative element has been eliminated. Unsatisfactory elements in present arrangements in this country. Policy of National Institute for the Blind.

Conclusions:

1. That method analogous to American system should be adopted.
2. That, pending this, Consultative Committee should continue to advise N.I.B., that demand should be stimulated by circularization of schools, and that Local Education Authorities should be impressed with importance of providing adequate funds for provision of books and apparatus.

THE EDUCATION OF THE BLIND

PART I

ADMINISTRATIVE

CHAPTER 1

HISTORY AND SURVEY

The first school for the blind was founded in Paris in 1784 by Valentin Haüy, who also originated the use of print in raised letters, employing italic type for the purpose. The education of the blind in England began to take form a little later, and in 1791 the first institution was established in Liverpool. This was followed in 1793 by two more institutions, one at Bristol and one in Edinburgh, and in 1799 by the School for the Indigent Blind, Southwark, which was removed in 1902 to Leatherhead. During the first half of the nineteenth century many other institutions were established, including those in Norwich (1805), York (1833), Manchester (1837), London—London Society for Teaching and Training the Blind, Swiss Cottage—Exeter, and Newcastle (1838), Liverpool—Catholic Blind Asylum (1845), Brighton (1842), Nottingham (1843) and Birmingham (1851).

The teaching given in these schools during the first half of the century was hampered by the fact that as yet no embossed type had been generally adopted ; the different institutions sponsored different types, and as a result books were limited in number and costly in price. At the same time, these early institutions did fine pioneer work in removing the blind admitted to them from the mental stagnation which had hitherto been their lot, and the variety of apparatus which has come down from early days is witness to the ingenuity, whole-hearted devotion and endless patience of those first educationists.

In 1829 Louis Braille devised the six-point system which bears his name, and made both reading and writing possible for the blind ; it was not generally adopted in this country for many years after its invention, but eventually made its way into every school and institution in England and America.

An important development of voluntary work for blind education was the foundation in 1868 of the British and Foreign Blind Association, now the National Institute for the Blind. Its founder, Dr. Armitage, was untiring in his efforts to forward the use of Braille in schools for the blind throughout the country, and his work in bringing this type to the notice of educationists certainly resulted in its general adoption at an earlier date than would have been the case without his zealous labours.

In 1869, Worcester College for the Blind was established to provide higher education preparatory to the University. In this school pupils were retained up to adult years.

Dr. Armitage had drawn attention in 1866 to the lack of employment among adult blind trained in institutions, and in the conviction that much could be done to remedy the existing defects by better educational conditions, he succeeded in 1872 in bringing about the establishment of the Royal Normal College for the Blind, under the direction of Mr. (later Sir) Francis Campbell. Since then a number of institutions, some educational, others industrial, have set up vocational courses. The higher education of the blind was materially assisted by Gardner's Trust for the Blind, which became available in 1882, and devoted much of its income to the training of the blind in music, crafts, trades, and the professions.

The early schools for the blind were residential, and little was done in the direction of providing day schools, until in 1874 the London School Board decided to establish special classes for the blind and deaf, the first day school for the blind being opened in 1879. For sixteen years these schools were conducted without Government Grant until they fell within the scope of the Elementary Education (Blind and Deaf Children) Act, 1893.

The various individual and voluntary undertakings we have noted gradually paved the way for State action, and in 1885 the Royal Commission on the Blind and Deaf took evidence on the whole subject. Under the Education Act 1870, locally elected School Boards had been required to provide elementary schools throughout the country, but no special provision had been made for blind children. The Royal Commission in its Report recommended the compulsory education of the blind and deaf until the age of 16, that of the blind to begin at 5, and that of the deaf at 7 years of age.

These recommendations were embodied in the Elementary Education (Blind and Deaf Children) Act, 1893, which laid upon the School Boards the duty of providing education for blind and deaf children resident in their area in some school certified for the purpose by the Education Department. The Act resulted not only in the establishment of day schools and institutions throughout the country, but also in the improvement in the accommodation and equipment of those institutions already in existence.

By the Education Act, 1902, School Boards were abolished, and their functions transferred to County Councils, County Borough Councils and certain Borough and Urban District Councils which thus became Local Education Authorities. These Authorities are the Councils of Counties, County Boroughs, Boroughs with a population of more than 10,000 at the 1901 Census, and Urban Districts with a population of more than 20,000 at the same date. The Councils of Counties and County Boroughs are responsible both for elementary and higher education, including the vocational training of blind persons, while Boroughs and Urban Districts are concerned only with elementary education.

Education Authorities carry out their duty of educating the blind by:

1. Providing a Special School, which is usually a day school, *or*

2. Combining with other Authorities to provide a Special School, as at Gorleston and Stoke-on-Trent

(Both these types of schools are technically known as "provided schools"), *or*

3. Sending the blind to a provided school maintained by some other Local Education Authority, *or*

4. Sending the blind to a school maintained by a private body. These last are all residential, and technically known as "non-provided schools."

It will therefore be seen that on the Local Education Authority rests the responsibility of deciding (*a*) whether a blind child is capable of profiting by education, (*b*) if so, what elementary education he shall receive, (*c*) whether, on attaining 16 years of age, he shall receive vocational training, and if so, where.

The Education Act, 1918, declared that the powers of Local Education Authorities included power to give maintenance grants to pupils in training, a great advantage to blind adults, many with wife and children dependent on them, who needed a course of instruction in some industrial occupation and were without means of support.

State Grants in aid of education were first administered by a Committee of the Privy Council. The work involved resulted in the establishment of a central Education Department which in 1899 became the Board of Education. The Board is responsible to Parliament for the payment of the grants, and inspection of all the grant-earning schools is therefore necessary.

Originally schools for the blind were inspected by the

Board's District Inspectors of the Elementary Branch, but in 1903 the late Dr. Eichholz was appointed H.M. Inspector, and charged *inter alia* with the duty of general supervision of all schools and institutions certified under the Blind and Deaf Children Act. Certain day schools for the blind continued, however, to be reported upon by the Board's District Inspectors. In 1907 the Medical Branch of the Board of Education came into existence, and Dr. Eichholz was attached to this branch. When further medical officers were appointed, Dr. Eichholz shared with some of them his duties regarding schools for the blind. In 1920 the Board decided that the time had come for all special schools (including those for the blind) to be taken over by the Board's medical officers, and from that date responsibility for inspecting and reporting upon them has rested with those officers.

The Board's view has been that blindness gives rise to questions which must of necessity be determined on medical or medico-psychological grounds, and that the primary responsibility, therefore, for the inspection of special schools for the blind should rest with medical men. The Board were, however, alive to the need for close correlation between the education of the Special Schools, and that of the ordinary public elementary schools, and to meet this need appointed as H.M. Inspector in 1931 an educational psychologist, with the special duty of inspecting and reporting upon Special Schools, including those for the blind.

The carrying out of an educational system, however complete on its administrative side, can only be effected by highly trained and qualified teachers, and for many years after the education of the blind became compulsory it was apparent that teachers in schools for the blind were often but poorly equipped for their work. To meet this need the College of Teachers of the Blind was established in 1908. Its object was to do everything possible to raise the standard of blind education, and one means to this end was the institution of examinations for teachers ; the first examination recognized by the Board of Education was held in July 1908. Teachers in schools for the blind are required by the Board to obtain the diploma issued by the College as a condition of their permanent recognition.

Survey of Present Position

The present educational provision for the blind in Great Britain is reasonably complete. It covers the range from infancy, where the residential nursery school provides for the pre-school child, through youth, where day or residential school gives education between the ages of 5 and 16, to adolescence, where the training centre fits the blind boy and girl for a trade, or the secondary school prepares them for a professional career or for the University.

(a) *The Pre-School Child.*

The number of blind children in England and Wales under the age of 5 on March 31st, 1932 (the year in which this Committee compiled its statistics), was 225, of whom about 155 were cared for in their own homes, visited by the Maternity and Child Welfare authority in the same way as the normal child, but generally receiving in addition visits from the home teacher provided by the local authority as part of its blind welfare service.

In 1918 the National Institute for the Blind opened its first residential nursery school, followed in 1923 and 1924 by two further schools of the same type. These schools, known as the Sunshine Homes for Blind Babies, have accommodation for 96 children who, for any reason, cannot be adequately cared for in their own homes. They are accepted from earliest infancy, and prepared for school life by training in habits of personal hygiene and independence. At their inception the National Institute for the Blind attached more importance to their function as homes than as schools, but as experience of the value of pre-school education accumulated after the Education Act of 1918 (which gave legislative power to Local Education

Authorities to supply or aid the supply of Nursery Schools), the methods and ideals of Nursery Schools were assimilated by the Sunshine Homes ; in 1932 the N.I.B. confirmed its educational policy for the Homes by appointing as its educational adviser a specialist on Nursery Schools. General medical supervision is provided, together with regular dental, ophthalmological and orthopædic inspection, with any necessary subsequent treatment. One Home is set aside for the reception of retarded children who show promise, with special care and treatment, of becoming normal.

(*b*) *The School Child.*

On January 31st, 1932, there were 34 primary schools for the education of the blind between the ages of 5 and 16. The Hampshire and Isle of Wight School has since been closed, and the London County Council has transferred its pupils from day schools to other schools for the blind. Of these 34 schools, 15 were residential only, 9 day only, and 10 both day and residential.

There were 1062 boys and 921 girls in these schools, a total of 1983, of whom 469 or 23 per cent. were day scholars. The 334 children in schools which were exclusively day schools constituted nearly 17 per cent. of the total of children in all schools, a figure significant in that it shows how, in any consideration of the education of the blind, the problems of day schools must be considered.

The curriculum in the schools is in the main similar to that in ordinary elementary schools, the two principal differences being (*a*) the use of Braille as a medium of instruction, (*b*) the stress laid upon handwork, and the encouragement of manual dexterity.

The education of the blind is by no means confined to the classroom, as not the least part of the teacher's task is the prevention and eradication of " mannerisms," the cultivation of good posture and of general normality of behaviour. In every well-organized school for the blind, physical education, including gymnastics (with remedial exercises where necessary), games and dancing play an important part. The social training of the blind child, which shall enable him to take his place as a responsible member of the community, with a due sense of the duties of citizenship, is also part of the preparation for life which should be given during school days.

(*c*) *The Talented Child.*

The blind child whose parents can afford education of the public school type, and the gifted child who appears likely to benefit by secondary education (with or without aid from scholarships, or grants from private or public funds), may be received at one of the three following schools :

(*a*) Worcester College for the Blind. Here there is accommodation for about 50 boys, and the school is divided into three departments :

1. Junior, for boys from 8 to 12 years.
2. The main school, for boys from 12 to 19, with classical, modern, and commercial sides.
3. Special Section for students over the age of 19.

(*b*) Chorleywood College for Girls with Little or No Sight. This school, which is under the management of the National Institute for the Blind, provides education on public school lines for blind girls, and has accommodation for 45 resident pupils. A preparatory department for boys from 4 to 8 is also provided.

(*c*) The Royal Normal College for the Blind, which, in addition to its elementary and training departments, has a department for secondary education of boys and girls, with accommodation for 20 pupils.

Pupils at these three schools are prepared for University Entrance examinations, Higher Certificate and School Certificate.

(*d*) *The Retarded Child.*

Provision for the retarded blind child has been made since 1931 at Court Grange, Abbotskerswell, under the management of the National Institute for the Blind. There is accommodation for 34 resident children, and by adequate staffing the school is able to give the backward child more individual attention than he could receive at an ordinary school where, in any case, his slow progress would impede the brighter pupils. The school has as its primary object the rehabilitation of children whose mental development is retarded by causes other than inherent defect of mind.[1] Open-air exercise, games and handwork play an important part in the curriculum, and special provision is made for the treatment of any physical defects additional to blindness.

(*e*) *The Deaf-Blind Child.*

Deaf-blind children may be received at the London County Council School for Defective Deaf Children at Penn (Buckinghamshire), but apart from this there is no specific provision for children with this dual defect. Fortunately the number of such children is small.

(*f*) *Provision for Training.*

On January 31st, 1932, training was provided at 42 centres for 772 young persons between the ages of 16 and 21, and for 641 trainees over the age of 21. This training was almost exclusively technical, with the exception of that given at the Massage School of the National Institute for the Blind, and training in music, shorthand and typewriting given in certain other centres. The technical training provided included the making of baskets, bedding, brushes, mats, machine-knitted goods, woven goods, piano tuning and boot repairing. In accordance with the regulations of the Board of Education, technical training for those under 21 must be accompanied by "continuance of instruction in general subjects, and appropriate physical training." Hostel accommodation for blind persons in technical training is provided at most of the larger training centres. Special provision for the technical training of the deaf-blind is provided at the Royal School for the Blind, Leatherhead.

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[1] This Report does not attempt to deal with the question of the care of the ineducable mentally defective blind child. Such children are provided for at the Ellen Terry National Homes for Blind Mentally Defective Children where there is accommodation for 30 boys and girls, whose condition is such that they cannot benefit by education. The Homes do not form part of the educational system for blind children.

The School of the Future: A Suggestion

The majority of schools for the blind in this country range in numbers from about forty to about ninety, there being only two with an attendance of over a hundred, while a large number, particularly of day schools, accommodate 20 to 40 children. If infantile blindness continues to decrease, schools will become even smaller, unless their number is reduced.

It is generally recognized among educationists that progress is made unnecessarily difficult, if not impossible, without adequate classification based on age, educational receptivity and ability. According to the present provision of schools anything but the minimum of curriculum and classification is outside the region of possibility, and elasticity of arrangement to suit the individual is too much to expect. This is a disappointing landscape and yet it is difficult to see what practical suggestions can be offered.

If we were planning on a clean sheet we should like to see a few large residential schools meeting the needs of the whole country, each with adequate numbers for efficient organization and each with a complete programme for children of compulsory school age.

Such a programme would include the following:

Infant School . .	children from 5–7 years.
Primary School .	children from 7–11 years.
Post-primary School .	children from 11–16 years. (Alternative curricula.)

Continuation School:
- (*a*) Music and Tuning Department.
- (*b*) Academic Studies.
- (*c*) Commercial.
- (*d*) Industrial Training.
    1. Baskets.
    2. Boots.
    3. Brushes.
    4. Machine Knitting—flat.
    5. ,, ,, —circular.

There should also be nursery schools on a regional basis for classification of young blind children requiring to be educated at such schools.

This would be something new in England. It would do much to break down the invidious distinctions among the various types of trade and professional training. It would give the pupil the opportunity of following the line in which his aptitudes would make success most likely. It would strive to minimize the snobbishness of the bookish student and insist on the pride of craft in the industrial. It would give the future manual worker such educational pabulum as he could digest without limiting it to the meagre fare of the Elementary School, where the curriculum is necessarily governed by the ability of the mediocre. Here is envisaged an educational establishment which in obedience to the British doctrine of continuity would carry its programme forward to equal completeness in after-care.

Is this quite visionary? We do not think so. Circumstances have arisen in certain districts which seem to suggest that there is now a golden opportunity to associate together a number of schools, combine them into one and make a school which would be so complete in its programme as to be a model of what a school for the blind should be. Even in the case of a large and well-graded school it is of the utmost importance that the size of the class should in no case be excessive, and we recommend that the staffing of schools for the blind should be on the basis of one teacher to an average number of 12 on the roll.

Another suggestion has been laid before us. It is in the direction of adopting for schools for the blind the organization formulated in the Hadow Report. It will be remembered that since 1926 the policy of the Board of Education has been to reorganize the Public Elementary School system in accordance with the recommendations of the Report presented in that year by the Consultative Committee, entitled *The Education of the Adolescent*, and commonly known as the Hadow Report, after Sir Henry Hadow, the Chairman of the Committee.

The main principle of their recommendations was that the education of children over the age of 11 should be treated as a separate and distinct phase of education from that of children below that age. The result of the adoption of this principle has been the emergence of a new type of school, the Senior School, the aim of which has been to provide a variety of curricula and activities designed to develop the capacities and aptitudes of the individual boys and girls with greater discrimination than is possible in the all age schools, which up to 1926 were almost universal. Special importance is attached, in these schools for older children, to practical instruction in the widest sense of the term, and the size of the class has been reduced in most cases to forty pupils.

The Table on page 13 shows that there are within fifty miles of Manchester eleven schools for the blind. At the moment ten of these schools follow much the same curriculum. It would be an educational advantage to make one of them a Kindergarten, retaining children up to 7 plus. Some could be turned into Junior Schools, with attendance up to 12 plus, and some others into Senior Schools. This would provide in each school a homogeneous group of children, which could very easily be arranged in suitable classes. Another possible group is London, East Anglia and the South-East, where there are eight schools.

The administrative difficulties even in a modified regional scheme are very formidable. The transfer of staffs, the setting up of an adequate machinery, the abrogation by certain authorities of their right of control, and the wide divergence of maintenance costs, are difficulties which would require much goodwill and ingenuity to overcome.

Of the two schemes we have considered, we think that the first is not only the more possible, but the more desirable ; in any case we should like to see some steps taken towards the amalgamation of the smaller with the larger schools, and we strongly recommend accordingly that the Board of Education use its influence to the utmost in the direction of such amalgamation.

Schools for the Blind within Fifty Miles of Manchester.

	Accommodation.	Boys on Roll (31. 1. 32).	Girls on Roll (31. 1. 32).	Total.
Bolton	75	26	19	45
Burnley	30	8	11	19
Leeds	100	53	41	94
Liverpool :				
Catholic	128	40	41	81
Wavertree	85	48	29	77
Manchester	147	64	42	106
Oldham	40	11	22	33
Preston	48	21	23	44
Sheffield	80	40	40	80
Southport Sunshine Home	30	16	9	25
Stoke	46	24	15	39
Total	809	351	292	643

CHAPTER 2

THE RECRUITMENT AND TRAINING OF TEACHERS

The recruitment of teachers for schools for the blind is no easy matter, for the field of candidates is often too small to ensure that the Managers are able to secure a teacher in every way fitted to teach blind children. There are three main reasons for this :

Teachers in schools for the blind have to undergo further study and to pass the examination for the Diploma of the College of Teachers of the Blind before they can be fully recognized. Moreover, since transfer from Special Schools to ordinary schools is uncommon, the headships of the large Elementary Schools, the prizes of the profession, are scarcely ever open to teachers in schools for the blind ; there is therefore a natural preference to remain in the ordinary school, where there is larger scope for promotion. The main reason, however, is a psychological one ; many teachers feel reluctant at the prospect of dealing with children who are defective, and this reluctance is often pronounced when the children are blind. The problem of teaching a blind child seems to such teachers a very difficult one, calling for rare degrees of sympathy and understanding to which they lay no claim. In short, many teachers are frightened by the word " blind."

Teaching blind children is not so much more difficult than teaching ordinary children, but at the same time it does present special problems, and it is obviously important that the staff of a school for the blind shall be as well equipped as possible. It is therefore necessary to overcome as far as possible the difficulties of recruitment, and to examine whether the present system is in all respects satisfactory.

Candidates for posts in schools for the blind are encouraged to become qualified for teaching in ordinary schools, as certificated or uncertificated teachers, and only to enter a school for the blind after two or three years' experience in such schools. On appointment to a school for the blind they are provisionally recognized for two years, during which period they are required to study for the Diploma of the College of Teachers of the Blind ; if they are unsuccessful, they are usually allowed a further year.

It has been represented that it is desirable that in addition to their course in the Training College prior to recognition in ordinary schools, teachers should be required to undergo a further period of specialized training, before being recognized as teachers in schools for the blind. There is clearly much to commend this proposal. It would still be advisable to require a teacher to obtain the Diploma after serving for some time in a school for the blind, since it would be necessary to give a practical examination, which could only fairly be imposed upon him after he had had the experience which nothing but the day-to-day contact with children under ordinary classroom conditions can give. In our view, however, desirable though the requirement of a further period of training may be, it would be impracticable. Teachers who have already become members of their profession would sometimes be reluctant to return to studentship, and many could not afford to give up three months, without salary, even though their expenses were paid. To require a further period would therefore be to erect an extra obstacle in what is already not an easy path, and only teachers with an exceptional enthusiasm for work among the blind would probably enter schools for the blind. On the whole, we regard the present system as the most practicable, though we consider that in certain respects it could be improved.

There are probably a number of teachers in ordinary schools who, if they could be induced to enter schools for the blind, would prove admirable recruits. Never having come into contact with blind children, these teachers are unaware of their potentialities. Something might be done to overcome this, by inviting the Heads of Training Colleges to bring their students to see schools for the blind ; the happy normal atmosphere which prevails in the best schools might well encourage students who would not otherwise have done so to devote themselves to teaching the blind. Such visits might also do something to remove the psychological fear of the blind referred to above. As a further means of gently introducing to schools for the blind teachers who might otherwise never enter them, we commend a useful experiment which has been tried in several schools. Teachers from ordinary elementary schools are appointed to live at the school for the blind, while carrying on their ordinary work during school hours. The teachers are employed in a supervisory capacity in the school for the blind, and undertake supervision of out-of-school activities. As a result, it has often happened that they, too, become specially interested in blind children, and give up their ordinary teaching to become teachers in schools for the blind.

The most important point in which the present system appears to us to be in need of improvement is the rarity of short courses for teachers of the blind. Such courses exist for teachers of physically defective and mentally defective children. Teachers in schools for the blind often feel themselves remote from the ordinary life and work of their profession, and, being to some extent cut off from their fellows, find it difficult to keep abreast of the times. For such teachers, attendance at a short course, on the lines of that held in the summer of 1935 at the School for the Blind, Swiss Cottage, would prove an immense help. This course, organized on the initiative of the Board of Education, was of great value to those who attended it.

From very early days, blind persons have been employed as teachers in schools for the blind, and it is not without significance that some of the most valued school possessions in use to-day, such as Braille and the arithmetic board, are the contributions of these teachers of the past.

It is generally admitted that blind teachers have a special understanding of, and sympathy with, blind children. They can appreciate the children's difficulties, their potentialities and their mentality, in a way that few persons with sight, however sympathetic, can possibly do. They can give advice out of their own experience with regard to difficulties which arise in the daily life of the school. They provide an invaluable source of inspiration, since to become recognized as teachers they must necessarily have surmounted difficulties and obstacles which, to many blind children, must otherwise appear insurmountable.

But it would be absurd to contend that they have not their limitations. They themselves freely admit these limitations. They cannot, for instance, take as full a share in many outdoor games and physical activities as their seeing colleagues, nor are they able, with equal facility, to correct the mannerisms to which young children are so prone. For this latter reason, we do not think it would be in the best interests of the children for a blind teacher to have sole responsibility for an infant school or for a class of junior children, though in some parts of the work of children of this age, such as handicrafts, Braille reading and writing, they are capable of doing most efficient work.

It is probable that the case for blind teachers has been prejudiced in the past by the weakness of some who have not had the personal qualities nor the training to fit them for such work, and we therefore urge that no encouragement should be given to young persons to embark on this career unless they possess the essential qualities which may reasonably be looked for.

With regard to the training of blind teachers, we are not convinced that the present method is entirely satisfactory.

The usual course is one of two years, which may be reduced to one year if a University Degree is possessed. A two-years' course is the minimum demanded in the case of seeing students at a Training College ; in the case of blind students it does not seem sufficient. The course should extend, in our opinion, to three years, the final year being spent very largely in obtaining teaching experience, not only in schools for the blind, but if possible also in schools for seeing children, and in paying visits for observation to typical educational institutions.

Since blind children must in their education be brought into contact with the actualities of life, it is of the greatest importance that blind teachers should have many interests outside the life of the school where they are serving. The wider their interests, and the more frequent their intercourse with society in general, the better teachers they are likely to be. We are glad to hear that many blind teachers have these wider interests, that they belong to educational and other societies, attend lectures, and take their part in the general life of the community.

CHAPTER 3

ASCERTAINMENT OF BLIND CHILDREN

Under Section 52 of the Education Act, 1921, each Local Education Authority is required to provide for the education of blind children between the ages of 5 and 16 resident in its area, and this duty implies an obligation to ascertain all such children.

Section 69 of the Act provides that the expression *blind* means " too blind to be able to read the ordinary school books used by children," a definition wider than that adopted for the purposes of the Blind Persons Act, which runs " so blind as to be unable to perform any work for which eyesight is essential." The Committee on the Education of the Partially Sighted [1] grouped the children certified as blind under the Education Act as follows :

(*a*) Those who, having no perception of light or having extremely defective vision, cannot be taught by methods involving the use of sight.

(*b*) Those who on account of defective vision cannot follow the ordinary school curriculum but can see well enough to be taught by special methods involving the use of sight.

(*c*) Those who are suffering from conditions such as myopia, which may be aggravated by following the ordinary school curriculum.

We agree with this classification. Just as the Committee referred to confined its consideration to categories (*b*) and (*c*), so we, in this Report, will confine our consideration to category (*a*) except in so far as the wide educational definition of blindness occasionally creates difficulties with children who have been educated in schools for the blind, but who are in categories (*b*) or (*c*) and will be ineligible for the benefits of the Blind Persons Act on leaving school.

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[1] Report of the Committee of Inquiry into Problems Relating to Partially Sighted Children, see page 7.

Under the School Medical Service all children in Public Elementary Schools are, or should be, medically examined within a year of admission to school, at the age of 8, and at the age of 12. At the initial examination (between the ages of 5 and 6) it is usually impracticable to test for visual acuity, and such a routine test takes place at the age of 8. But the School Medical Service, in addition to the routine examinations, provides for special examination of all children reported as appearing unable to benefit by attendance at the ordinary school, and the disability of blindness is so obvious that a blind child already at school is almost always referred for medical examination at an early stage by teacher or school nurse. It is, of course, possible that in rare cases a child may not attend school at all, and so be missed. We are satisfied that the undoubtedly blind child at school is promptly ascertained, even if, owing either to administrative difficulties or parental objection, his transfer to a school for the blind may not always follow immediately.

There are, however, three classes of children who cause special difficulty : (*a*) children on the borderline of sight, (*b*) children whose vision is deteriorating, and (*c*) children with other defects. It is possible that in the first two classes avoidable delay in sending the children to schools for the blind sometimes occurs, but in the third class the other defects may make the possibility of any education problematical.

In view of the complaints sometimes heard of the late arrival of children at schools for the blind, we obtained a return from all schools as at the 31st January 1932, which showed that there were at that date 1707 children being taught Braille. We ascertained the dates of the admission of 1647 of these children to any school for the blind (one school did not make a return) and found them to be as follows:

Admitted under 4	19
4– 5	19
5– 6	330
6– 7	251
7– 8	287
8– 9	239
9–10	151
10–11	114
11–12	100
12–13	65
13–14	39
14–15	24
15–16	9
	1647

Although 502 children were admitted after the age of 9, it would be wrong to assume that these children would necessarily have been suitable for admission to a school for the blind at the age of 5. Many did not become blind until later, others are even now in the category of the partially sighted, and some suffer from other defects (e.g. those requiring hospital treatment) which have unfitted them for education. We are satisfied that there is only a small number of children who, through failure of ascertainment, have been denied education in a school for the blind. Our opinion in this regard has been confirmed by a detailed investigation carried out by the Committee into all the admissions to two representative schools for the blind over a term of years.

There is reason to suppose that parental objection explains some cases of late entry to school, especially where a residential school is in question. We suggest that in any case of difficulty the School Attendance Officer should be advised to invite the co-operation of the local society for the blind to influence the parents in the best interests of the child. The education of a blind child is a long and difficult process, and the task is made much more difficult if it begins at the age of 8 or 9 instead of at the age of 5.

In addition to the duty of the Local Education Authority to ascertain blind children in its area, there is the duty of the Local Authority, under its scheme made under the Blind Persons Act, either directly, or through the agency of a voluntary association for the blind, to keep a Register of all blind persons in the area. If this Register is properly maintained, and there is co-operation between the two authorities in the case of all blind children on the Register who are not receiving appropriate education, a valuable check is provided. In this connection we may refer our readers to Circular 1281 of the Ministry of Health, which deals with the registration of blind children. The responsibility for the education of blind children rests on the Local Education Authority, but the closest co-operation between that authority, the Blind Persons Act Authority, and voluntary societies for the blind is desirable.

The ascertainment of blindness should not be confined to the initial discovery of blind children. The fact that the definition of blindness under the Education Act is wider than that under the Blind Persons Act means that a child covered by the former definition and not by the latter, finds himself at the age of 16 a member of the sighted community, ineligible for the benefits of the Blind Persons Act. Schools for the blind to-day are in general alive to the hardship that this entails, and it is desirable that wherever practicable a decision whether the child will be blind under the Blind Persons Act should be taken at as early an age as possible. If a child is retained in a school for the blind, who is unlikely to be blind within the meaning of the Blind Persons Act on attaining the age of 16, it is important that the position should be made clear to the child, and to his parents or guardians. We recommend that every child should be examined at the age of 13 by a competent ophthalmologist with a view to his giving a written opinion on the probability of the child being certified as blind under the Blind Persons Act, and in doubtful cases that this procedure shall be repeated at intervals of six months. Some cases will be difficult, but the dangers to which we refer could be largely met if a responsible opinion were recorded on each case at the proper time. It has sometimes been suggested that the definitions of blindness in the Education Act and the Blind Persons Act should be made identical, but this, in our view, would be a mistake, as it is important that the definition in each case should have regard to the purpose for which it is used.

We cannot close this section of our Report without reference to Circular 1431 issued by the Board of Education (October 1933) with reference to the certification of blind children, and to the Circular 1353 issued on the same date by the Ministry of Health with reference to the certification of blindness for the purposes of the Blind Persons Act. Both circulars enclosed a similar form of certificate (Form B.D. 8 for the Blind Persons Act, and Form 37 D for the certification of children). In view of the importance of the Form 37 D and its accompanying circular, we commend them to the attention of all interested in the question of the certification of blind children. If the third question in the Form (Do you consider it likely that the child will be blind within the meaning of the Blind Persons Act, 1920, on attaining the age of 16 ?) can be answered in the affirmative, schools for the blind can proceed with a reasonable measure of confidence, but where it is answered in the negative or doubtfully, the child's future must receive special consideration.

The Minister of Health, in an Appendix to Circular 1353, has set out the criteria to be adopted for determining whether or not a person satisfies the condition of blindness laid down in the Blind Persons Act. In other words, the economic definition of the Act is interpreted in medical terms which can be applied by ophthalmologists to specific cases. Is it possible to draw up a similar set of medical criteria to define children who will, in all probability, be eligible for benefits under the Blind Persons Act on leaving school and who should be educated by methods applicable only to blind children (i.e. children defined in category (*a*) on page 19 as " those who, having no perception of light, or, having extremely defective vision, cannot be taught by methods involving the use of sight ") ? The question was referred to the Board of Education by this Committee, and the Board asked for assistance on this technical problem from the Prevention of Blindness Committee of the Union of Counties Associations for the Blind. This body set up a sub-committee which, in due course, reported to the Board defining in ophthalmic terms children who should be admitted to schools for the blind and educated by methods applicable only to the blind. These ophthalmic terms were published in Sir George Newman's Annual Report on *The Health of the School Child* for the year 1933. They are as follows :

In the selection of children for admission to Blind Schools no hard and fast rules can be laid down and every case should be treated on its own merits. There are, however, certain general principles which can be formulated for the guidance of the ophthalmic surgeons who are responsible for the selection of such children :

Visual Acuity.—Visual Acuity should be measured with both eyes open and with suitable glasses if necessary. The best test card for this purpose is the variable E card, i.e. one in which the E signs can be rotated in any desired direction. This test card does not require the knowledge of letters and needs only the simplest action of imitating with the fingers the position of the limbs of the E.

Visual Standards.—(1) A child who has visual acuity (with correction) of less than 6/60 should go to a blind school.

(2) A child who has visual acuity (with correction) of 6/60 or better *may* need to go to a blind school if he has

(*a*) nystagmus, associated with :
- (i) defects in the media ;
- (ii) defects in the coats of the eye.

(*b*) steady fixation, associated with :

  (i) definitely contracted field of vision ;
  (ii) conditions which are likely to get rapidly worse during school age.

Doubtful Cases.—It may be desirable to send doubtful cases to a class for partially sighted children, where they can be kept under observation.

Periodic Revision.—The certification of blindness in children should always be regarded as *provisional and subject to revision.* Children in blind schools should be periodically examined by an ophthalmic surgeon, and their status determined at each examination. The vision of some children who are properly in blind schools in early years improves materially with age.

CHAPTER 4

DOUBLY DEFECTIVE CHILDREN

1. The Mentally Defective

The term "defectiveness" as applied to the mental endowment of children covers a very wide range of mental disabilities, and as the degree of defectiveness becomes more serious the proportion of children so affected dwindles very rapidly. The various grades of mental subnormality shade almost imperceptibly into one another, and with blind even more than with seeing children it is extremely difficult to measure precisely the amount of mental defect. From the educational point of view the measurement of mental defect raises an acute problem when it becomes necessary to decide whether a particular child shall, or shall not, be educated with more normal children.

Mentally defective children are classified under two main headings, (1) the ineducable, and (2) the educable. The ineducables include the idiots, who are unable to guard themselves against common physical dangers, and the imbeciles, who are incapable of being taught to manage themselves or their affairs. When a child has been certified by a Local Education Authority to be either an idiot or an imbecile he is "notified" to the Mental Deficiency Authority and handed over to their care, and so passes out of the educational system with which we are immediately concerned.

The educable class comprises the feeble-minded, whose distinguishing characteristic is that they are not considered capable of profiting by the instruction given in ordinary schools. At a somewhat higher level, but differing from the feeble-minded in degree of mental capacity rather than in kind, are the dull, who are far more numerous than the feeble-minded ; these children are usually educated in the ordinary schools. These two types of children the Mental Deficiency Committee in their 1929 Report class together under the heading of " The Retarded Group " ; they call the former " the more retarded " and the latter " the less retarded," thus using the term retardation in a technical sense, as implying a lack of inborn mental capacity.

In addition to the categories named above, there is a small group known as moral defectives, in whom is found mental defectiveness coupled with vicious tendencies which make them dangerous companions for other children. Such children are rare, and among the blind are likely to be found so infrequently that they do not raise an important administrative issue.

In the seeing world, the various types of children named above are broadly classified according to their " intelligence quotients " or " mental ratios " as determined by Intelligence Tests. The less retarded have mental ratios between 85 and 70, the more retarded between 70 and 50 ; the imbeciles and idiots have mental ratios of less than 50 and 20 respectively. But social considerations also enter into the classification, and the type of education given to a particular child depends upon whether he is likely or unlikely to require close supervision or institutional care throughout the whole of his life. If there is a probability that the child will be able as an adult to lead a life of reasonable usefulness and independence, his education should be conducted on the principle that he shall spend his school life in as close association as possible with normal members of society ; if this probability is absent, the child should usually be sent to a Special School or Institution.

We think that the same general principles should hold in blind education, but we cannot ignore the fact that special circumstances modify, and render more difficult, their application to the case of the blind. It will be clear that when blindness is added to a subnormal mental endowment the likelihood that a child will become a useful and independent citizen is greatly diminished, and *a priori* the need for a school or schools specially set apart for " more retarded " blind children is greater than it is with seeing children. Our inquiries have tended to show that the blind population contains a disproportionately large number of retarded children, but not all of these should be sent to a school set apart. Relegation to such a school is a measure only to be adopted after a close review of the particular circumstances, in the light of the considerations put forward in the paragraphs that follow.

In the first place, we must note the serious difficulty of devising a reliable method of ascertaining a blind child's mental capacity, and of getting a satisfactory rating scale for his intelligence. As we say elsewhere,[1] the Intelligence Tests used for seeing children cannot be used for blind children without substantial modifications which render the validity of the Intelligence Quotients derived from them uncertain. Such tests as have yet been prepared for use with blind children serve to indicate with certainty only the grosser cases of mental defect, but for discrimination between the more and the less retarded, and between the normal and the less retarded, we need tests of a far more searching and reliable character, before we can use their results as a trustworthy guide to classification. Towards the solution of this problem we can only proceed by further research into the intelligence of the blind.

There is, further, the difficulty of securing agreement as to the borderline which shall divide those who shall attend ordinary schools, and those for whom separate provision shall be made. With seeing children, the borderline has been hitherto fixed at an Intelligence Quotient of about 70, though in the case of children who present no behaviour problems there is a tendency to lower the limit. It is, however, conceivable that, with the added handicap of blindness, a dividing line at this point would prove too low, and we lack positive evidence as to the level of intelligence which is just sufficient to enable a child to participate in the normal school life, and to lead an independent life after school. As to this we suggest a possible line of inquiry which might provide valuable, though not necessarily conclusive, evidence, i.e. the limit of intelligence that is necessary for entry upon a course at a Continuation Centre. The typical feeble-minded school child would not repay the time and cost of a course of training, and an inquiry into the intelligence quotients of rejected blind trainees might give light on the point now under consideration. But without prejudging the issue of future experiments on the education of the more retarded blind child we record our opinion that school places should be provided for retarded blind children on a more liberal scale than is needed for seeing children, and that such a school or schools should cater for children of a wider range of mental ratios.

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[1] Part II, Ch. 4, p. 57.

As to the dull, or "less retarded," blind children, our convictions lead us to recommend that they shall as a rule remain in the ordinary schools for the blind, and that such differential treatment as they need shall be provided by means of special classes, or by sectional treatment within the class. One great hindrance to this lies in the small size of the ordinary schools for the blind, few of which are large enough to provide a special class without putting together children whose ages differ too widely. Concentration of the blind children into a small number of large schools would, among other things, help greatly to ameliorate the educational prospects of the less retarded children.

The foregoing considerations are based upon the assumption that it is possible to discriminate clearly between a permanent and inevitable retardation caused by a lack of innate capacity and a temporary "backwardness" caused by unfavourable environmental circumstances. Unfortunately it is not possible to make this discrimination with any degree of certainty. Educational backwardness of a remediable kind may be the result of one or more of a large number of accidental causes, such as infantile illness, physical accidents, malnutrition, want of sleep, unwise upbringing, whether through over-indulgence or excessive restraint, emotional conflicts due to a sense of inferiority or an unhappy home-life, belated admission to school, irregular attendance, or ineffective teaching. All these causes are probably at least as common among the blind as among the seeing, and some are certainly far more so. In favourable conditions the effects of these environmental handicaps tend gradually to pass away, and a backward child may begin to make steady or even rapid progress. It is, therefore, of the greatest importance that no child should be classified as innately dull or feeble-minded until it has been clearly established that his educational and general backwardness show no signs of yielding to suitable treatment. This means that all young blind children who, though suspected, are not clearly proved to be innately dull or feeble-minded, should undergo a period of observation for a period sufficiently long to remove all reasonable doubt as to their mental capacity, under the best conditions and most sympathetic treatment that the ordinary school can offer. The really important thing is that no child shall be prevented from spending as much of his school life as possible among his normal companions while there still remains a possibility of development that shows the first suspicion of mental defect to have been mistaken. Many children who are merely backward recover in a great measure from their early handicaps when sent to a residential school; but there are cases that are not amenable to even the best treatment that can be provided in the ordinary school for the blind, and for these some special provision must be made.

One further consideration remains. In deciding what is the best educational treatment for retarded blind children we have to consider not only their own particular interests, but also those of their fellow-pupils. The presence of a number of retarded children in a class for normal children may be a serious handicap to the progress of the other children. In such circumstances there is a natural incentive to the teacher to try to get rid of the difficult elements in the class. But while we fully admit the reality of the problems caused by the presence of exceptional children in a class, we wish to say emphatically that a desire to reduce to more manageable dimensions the range of abilities within a class is not in itself a sufficient reason for expelling the less gifted children to another institution. Many of the difficulties that attend a wide range of abilities can be overcome by using the resources of organization and technique to which we refer in Pt. VI, Ch. 4, and it is only when the presence of a retarded child is positively subversive of the general interests of the class that an argument for his removal on these grounds should be accepted as establishing an otherwise indecisive case.

To sum up, we recognize an urgent need for providing separate schools for the more seriously retarded blind children, but we can lay down no hard and fast rules for defining the category of children who should be sent to such schools. In our view, the interests of the children will be best served by avoiding nice distinctions of mental ratio and the like until our methods of diagnosing and treating mental defect, particularly among blind children, are on a much firmer footing. Meanwhile we think that the paramount question concerning the individual blind child whose removal from an ordinary school is under consideration is, "Can this removal be by any means avoided ?" and that the main objective of attempts to discriminate between different orders of ability should be to keep as many children as possible in the ordinary channels of educational and social life.

Existing Provision for Ineducable and Retarded Blind Children

At present the only institution for ineducable blind children is the Ellen Terry Home at Reigate, but such children are also admitted to other Certified Institutions among low-grade seeing children. For the feeble-minded or "more-retarded" children there is no separate school, though a few are to be found at Court Grange, Abbotskerswell, an institution of such interest as to merit a somewhat detailed description.

It was opened in 1931 by the authorities of the National Institute for the Blind, who for some time had been disquieted by the considerable percentage of blind infants who were rejected by medical authority on coming up for examination for admission to the Sunshine Homes as being incapable of profiting by the education given in those Homes. In deciding to create this new school, the Institute was influenced by representations made to it, particularly by one large school in the north of England, to the effect that the work of elementary schools for the blind was impeded by the presence of a certain number of retarded children, who could not receive the individual attention they seemed to require, and whose presence delayed the education of the other children. The Court Grange School has not been carried on for a sufficiently long time to enable final judgments to be made, but the need for it was evidenced by the fact that it came near to its maximum accommodation for 30 children within eighteen months of opening. It has now slightly enlarged its accommodation, and has 34 places. In the judgment of the staff and of other authorities, approximately one-half of these children are backward, i.e. children who, it is hoped, will presently return to ordinary schools for the blind, or will, at any rate, be able to take their place as normal blind people after the age of 16. The other half consists of children who have been subject, since they entered the school, to close individual attention and to the special régime which the school provides; the majority, so far as at present can be judged, are "dull," though some might be classified as feeble-minded in the sense of the Mental Deficiency Act. The National Institute has, however, rejected after adequate trial some children who were thought to be a drag on the other children, and Court Grange continues to provide primarily for backward children for whom there is a fair chance of "reclamation." Its value as an educational clinic to which difficult cases can be referred is obvious, and it is in fact the only school that is attempting to deal exclusively with the problem of the retarded blind child.

It is clear that the means available hitherto for dealing with retarded blind children have been inadequate, and we therefore welcome the steps recently taken by the National Institute to improve them.

The Institute has already gained considerable experience of a problem which hitherto had been very little known. A study of the children admitted to Court Grange since its foundation, taking account of their degree of blindness, their physical condition and mental standard, is convincing proof that no cut-and-dried classification is possible. Each child presents an individual problem, and has in fact been treated as such. Court Grange, in our view, should cater for all children who, by reason of actual or apparent retardation, are not making satisfactory progress at ordinary elementary schools for the blind. The policy of the Board of Education in advocating the association of retarded with normal children in schools for the seeing is not as a general rule applicable to the blind.

We understand, and we entirely approve, that no definition of an exclusive character will be made in considering applications for admission to Court Grange, and all children who appear *prima facie* suitable will be examined by the National Institute's Medical Consultant, whose decision shall be final. After admission, any child who is making, or seems likely to make, progress socially or educationally, and is not detrimental to the other children, will be retained.

Court Grange has passed beyond the experimental stage, but it must always regard each new entrant in a sense as experimental material. Premature conclusions with regard to any child must be avoided. The school is performing a valuable function, and the suggestion that a second school of the kind should be established to deal particularly with children in the north of England is one to be kept carefully in mind.

2. Epileptic Children

A child with sight suffering from epilepsy of the major form is excluded from school because his illness causes alarm and distress to other children. It is obvious that a blind child with major epilepsy has to be excluded from schools for the blind for the same reason. The number of blind epileptic children is happily very small. A recent return made to the Board of Education by School Medical Officers showed 27 such children in the whole of England and Wales. Ten of these were known to be suffering from some other mental or physical defect which made education impossible, and of the remainder parental or other objection reduced the number for whom education was desired and possible to three. One of the tragic facts of epilepsy is that it often leads to mental deterioration, so that even if education is given its results may be ineffectual in a few years.

Even if the number concerned were somewhat larger, the difficulty of meeting all the factors in the case would be very great. There are at present a large number of epileptic children not in attendance at school or in an institution, and the small number of blind epileptic children is likely to remain unprovided for until the problem of the care of epileptic children as a whole is solved. At some later date it may be possible to make provision for blind epileptic children, by finding accommodation for them in an epileptic colony and by making special provision for them in respect of their blindness.

3. The Deaf-Blind

Dr. Eichholz, in his *Study of the Deaf in England and Wales* (1932), stated that there were 18 deaf-blind children between the ages of 5 and 16, and 25 adolescents between the ages of 16 and 21. There were none under 5 years of age. He analysed the 43 deaf-blind between the ages of 5 and 21 thus :

In school or training	20
Awaiting education or training	8
Employed	2
Untrainable	10
No information	3

It is not stated whether deaf includes deaf-mutes only, or other deaf children and adolescents. The figures are probably, however, not limited to deaf-mutes. The numbers are fortunately small, even if, as is possibly the case, some who might properly be classified as deaf-blind have been omitted, but the problem is one of peculiar difficulty.

The technique to be followed in the education of deaf-blind children depends on whether they have acquired the power of language. If they have lost their hearing after they have acquired speech or language, there is much to be said for educating them in a school for the blind.

Where, however, the deaf-blind child has not acquired speech and language, there can be no doubt that deafness is the dominant defect, and that the child should be educated by deaf methods, at least until he has acquired such speech and language. But neither the educational technique of schools for the blind, nor that of schools for the deaf, is fitted for dealing with such children, and the question arises how best they can be taught. In view of the small numbers, we do not consider that a separate special school would be practicable, even if it were desirable. On the whole, it appears to us that the best course would be to educate such of these children as are educable in special small classes in schools for the blind. The teachers of such children need to possess highly specialized qualifications for the work, and should be carefully selected.

The account given by Mrs. Macy (formerly Miss Sullivan) of her experience in teaching Helen Keller gives some idea of the difficulties involved. We recommend that such classes should be included in schools for the blind rather than in schools for the deaf, for as the children grow older, the dominant defect will pass from deafness to blindness. Blindness is a much more serious economic defect than deafness, and the children should in the later years of school life be taught by the methods of a school for the blind with a view to the acquirement of manual dexterity, and, if possible, trade training.

So far as we are aware, there is only one school in England which definitely provides for children suffering from deafness combined with other defects, though there are a few deaf-blind children in other schools for the blind. This is the London County Council School at Penn (Buckinghamshire), which accepts children from other local authorities so far as accommodation permits. We understand that there are only one or two blind-deaf children at Penn, although there are several who are partially blind and partially deaf.

4. Other Physical Defects

Minor physical defects can be dealt with by remedial physical training in schools for the blind, but serious defects should be dealt with by early transfer of the blind child to an orthopædic hospital school, in the hope that he may receive such physical benefit that he may later be returned to a school for the blind. It must be borne in mind that serious physical defect generally has a retarding effect on mental development, and several of the backward children at Court Grange are suffering from physical handicap additional to their blindness.

PART II

GENERAL CONSIDERATIONS

PREFATORY NOTE

In the chapters that follow we have treated the education of the blind as if it were concerned only with children who are entirely sightless. We have done this, not from any failure to realize that the children in our schools for the blind have varying degrees of sight, but because we felt that a clear statement of the extreme case, free from continual qualifications and saving clauses to meet the case of the partially blind, is the most helpful way of presenting the problems we have had to face. We acknowledge, however, that the presence in our schools of children with widely different visual capacities is in many ways an addition to, and not a lightening of, the burden upon the teachers; it makes necessary different ways of approach to individual pupils, and calls upon teachers for an elasticity of mind and method even greater than that which is needed for teaching the totally blind. Many of the problems of teaching the partially blind are closely akin to those dealt with in the Report of the Committee of the Board of Education on Problems relating to Partially Sighted Children, which should be valuable to teachers of the partially blind, as indicating the direction to be followed in modifying the methods and principles discussed in the present Report.

One other point calls for mention here. During our discussions we had to consider whether in dealing with the successive stages of education we should follow the divisions laid down in the various Hadow Reports on the education of seeing children, viz. the Nursery and Infant Stage, from 2 years to 7 plus, the Junior Stage from 7 plus to 11 plus, and the Senior Stage from 11 plus onwards. But since schools for the blind are in the main schools for children of all ages, and blind children are almost always retarded in scholastic attainments as compared with seeing children, we decided that the use of the terms Infants, Junior, and Senior, with their rigid connotations of age, would be inappropriate to schools for the blind. We have, therefore, divided our chapters on educational methods into the Early Stage, up to about 9 years; the Middle Stage, up to about 14 years; and the Later Stage, from about 14 years onwards. We wish to make clear, however, that the age limits are rough and tentative, and that a stricter classification, if any should be needed, must await fuller knowledge of the mental growth of the blind.

CHAPTER 1

THE AIM OF EDUCATION

The education of the blind is only a part of the larger work of preparing all the young to take their place in the world. In a changing world like that of to-day this is a work of peculiar difficulty. Every change in our mode of life or in the structure of society brings with it some modification of the educational process, and we can only determine whither these changes are leading us by considering them in the light of the educational principles to which we hold. In order to see the special problems of blind education in their proper perspective it seems necessary to review broadly and briefly the field of contemporary educational thought and activity, for by reference to what we discern there we can best describe the general aims that should direct our search for a solution of the problems of educating the blind.

We are aware that it is impossible to put the whole meaning of the word education into a brief formula, but it will serve as a guide to the discussion that follows if we say what we conceive education to be. At its best and widest, then, education is the art of employing experience to fashion modes of feeling, thinking and action that conform to the highest standards of human value ; it has no limits within the sphere of man's relationships to his fellows and to his material environment, and it should be subject throughout to the moral law that the opportunity to gain imposes the duty to give. The task before us is to examine in turn the terms in which this conception of education is expressed and to consider their application to the special circumstances of the blind.

The phrase, " the education of the blind," implies education of the blind chiefly at the hands of seeing teachers and for the purposes of a seeing world. Administrators and seeing teachers bring into the schools for the blind the settled traditions and the current influences that determine educational doctrines at large, and also, perhaps more unfortunately, the standards by which educational efficiency is reckoned ; and our outlook on the problems of educating blind children is therefore mainly determined by general educational theories. Between the aims of educating the blind and the seeing there is indeed no essential difference, though the methods by which we seek to realize the aims are different. As generation succeeds generation the emphasis in educational thought may swing backward and forward, according to the political or philosophical temper of the time, between the pursuit of individual happiness and the enrichment of the social heritage, but this oscillation serves only to show that the vital problem is to reconcile these competing ideals. During the last generation the focal point of educational concern has undoubtedly been the individual child. His right to unfettered development has been loudly proclaimed ; the variations in the temperament, intelligence and practical aptitudes of different individuals have been intensively explored ; mass instruction has been roundly condemned, and class and sectional methods of teaching have sometimes been regarded not as good in themselves but as necessary concessions to the physical limitations of the teacher who is charged with the instruction of many scholars ; the educational system of the country has been modified so that it may fit more closely the divergent needs of different types of children. On every hand research workers have been investigating individual differences and devising means by which they may be met, so that every child may be able to make the best of the gifts with which he is endowed.

In contrast with the great output of work on the growth and characteristics of the individual, the studies on the manner in which children develop into social beings and the way in which the individual can best be trained to serve his fellows have been few and comparatively little known. Some valuable records have been made, for example, of the spontaneous play-associations that occur in groups of young children and of the manner in which their spoken intercourse develops ; and at the other pole of inquiry many studies of the social maladjustments of older children and adults have been made. But the main field of inquiry into the growth of those qualities that make a child into a valuable member of the society of his own generation and a sound builder of the society of the future is as yet almost untouched in secular education. The methods of preparing children to take their place as mutually dependent members of an ordered society are still of the traditional rule-of-thumb order. All the analysis of individual traits has not led to a knowledge of how best to effect a synthesis of the essential social qualities.

The same analytical trend is discernible in the realm of educational method. Great advances have been made in the teaching of the various subjects of the curriculum, and many new adventitious aids to teaching, such as the cinema, gramophone, wireless broadcasts, and countless means of illustration, have been brought into service. The teaching of geography, science, art and music, to name a few examples taken at random, is at its best far better than it was a generation ago. So many methods of treatment, so many varieties of knowledge and ways of organizing them, and so many material aids to teaching have been developed that their very multiplicity is an embarrassment to those teachers who have to cope with all subjects of the curriculum. In every subject the experts have made substantial advances in technique, but little progress has as yet been made towards subjecting the entire body of information and technique to the sway of a single directive purpose that shall guide and unify all the activities of the school. Such efforts at synthesis as have been made within the sphere of practical methods of education have been partial and somewhat sporadic, and the prominence accorded to them in educational literature is unduly flattering to the position that they occupy in the actual practice of most of our schools. We may cite as examples the Project Method, by which an endeavour is made to weave diverse threads of interest and activity into a single firm strand ; the Team System, which in spite of the undue emphasis that one sometimes finds on the competitive spirit does represent an effort to substitute the good of the team for the good of the individual ; and, outside the immediate ambit of school activities, the Scout and Guide movements, which set before their members a chivalrous ideal to govern their intercourse with their fellows.

In all the undoubted advantages that these improvements in the technique of education have brought, the schools for the blind have shared freely, and they have benefited particularly from the greater attention to individual needs and the breaking away from a standardized pattern of education. They have further profited from advances in their own special techniques, from the greatly increased supply of books in Braille, the better and more liberal supply of apparatus for sensory training, and most of all perhaps from the freer contact with the outer world that has followed the gradual decay of the institutional spirit. Indeed, the danger has not been that the schools for the blind should be left behind the schools for the seeing, but that they should be distracted from their deeper concerns by the pursuit of the many novelties that the educational world offers, and that teachers should be led to think that the desired ends of education can be achieved by the mere multiplication of unrelated means.

What these desired ends of education are we have tried to express in our definition of education, in which we suggest that the ultimate test of a good education is to be sought in the realm of values. A man has been well educated if within the limits of his experience and understanding he has learnt to recognize what is good and true and beautiful, and if to the limits of his capacity he has been equipped to pursue it. To know, to desire, and actively to pursue the things of greatest worth in the spheres of social and personal values are the marks of a good character, to the making of which all educational efforts should be directed.

CHAPTER 2

CONCERNING EXPERIENCE

Education proceeds by the accumulation and use of experience, and so long and in so far as a person is capable of profiting by new experiences his education continues. It is a great part of the business of an educator, whether parent or teacher, to provide the children in his charge with a succession of experiences suited to their interests and capacity, and to help them to master the means by which these experiences can be stored and capitalized for future use. We can only suggest a few of the multifarious types of experience necessary for the education of the child. Experiences necessary to his bodily health and safety must be repeated so that the appropriate responses to them become habitual ; the child must learn by experience how to control his bodily movements, and to acquire the innumerable forms of muscular skill that, consciously or unconsciously, enter most of his daily acts ; he must learn the arts of expressing his feelings and thoughts, and of interpreting those of others ; and, through the give-and-take of ordinary life, he must learn to effect a balance between his own interests and those of his fellows. One of the teacher's special concerns is to provide those experiences which will give to the child the power of access to the vast resources of human knowledge that are stored up in the literary, artistic, and scientific heritage of the race, or that live in the spoken language and the contemporary activities of man.

Most of the vital experiences of life come to the child as it were in the raw state, and it is the business of educators to deal with these raw experiences, so that they give rise to an organized body of knowledge adapted to the manifold purposes of life. The educational process is marked by the gradual emergence of the formalized knowledge that we call the arts and sciences, out of the welter of heterogeneous knowledge that the daily happenings of life provide. Educational method must therefore be largely concerned with the technique of expressing and formalizing knowledge derived from direct experience, and education merits the reproach of being merely formal or academic, only when it is more concerned with modes of expression than with the reality of the underlying experience. The education of the blind is exposed to a special danger of becoming formal, for the vital reason that blind children's experiences of the world are radically different from those of seeing children, and it is therefore unsafe to assume that they have the real knowledge of the world about them on which our traditional forms of education are founded.

Teachers seldom consciously admit the great store of knowledge that a young child brings with him when first he comes to school, but intercourse between teacher and child would be impossible if they had not a great fund of common experience and a common language in which to express it. The young seeing child is familiar with a multitude of characters and scenes of domestic and social life ; he knows the postman, the policeman, the 'bus driver ; the contents of the kitchen and bedroom ; the wares of the confectioner's, the greengrocer's and butcher's shops ; the scenes and incidents of street-life or the farmyard and countryside ; he knows the birds, the domestic animals, trees, bushes and flowers, and vaguely or definitely a thousand things besides. Every common noun that he uses, whether cloud or chimney or looking-glass, represents a host of experiences that he has discriminated and classified and summed up in the word. Experiences of such things as these, and of their observed relationships, are the very stuff of the child's mind, and on them the teacher draws daily for the purposes of his art. But how shall the seeing teacher proceed if, as in the case of the blind child, the images of these things are blurred, or shadowy, or non-existent ; if the words he himself uses unthinkingly in his daily speech refer to matters outside the narrow ken of his pupils ? How can he enter into their world of taste and smells and muscular sensations, of wandering sounds and voices ? By what self-discipline can he ensure that his words awaken in the children's minds images that are clearly apprehended, by reason of their own sensory experiences ? Is it not likely that he will fail to utilize much knowledge that the children really possess, and fall unconsciously into the error of assuming that they possess the kind of knowledge upon which teachers of seeing children are able to draw ?

Blind children have their own ways of assimilating and interpreting experience. Their chief handicap lies in the fact that the range of their sensory powers is largely restricted to the narrow limits of touch and earshot ; the chief difficulty of their education is that of bringing within this range the commonplace happenings and objects of daily life. We hold it therefore of the greatest importance that teachers of the blind, and particularly those in residential institutions, should remember always that the deepest and most fundamental needs of blind children are a rich and intimate experience of common things, and a direct acquaintance with the many characters that move across the scenes of daily life, and the activities in which these characters engage. For these no verbal substitutes will serve ; the children must learn to know persons and things in terms of their own sensory powers, and to meet the situations in which they occur on an independent footing. Without this direct contact with the world, all subsequent formalizations of knowledge may be riddled with errors and misunderstandings, and all evaluations of what is good and worthy in life may be shattered by encounter with reality. Only this first-hand experience will enable them to face with confidence the world that awaits them when they emerge from the shelter of the school.

But the work of the teacher has another aspect than that of an organizer and provider of experience ; he has to train the children to seek their own experiences. He must reveal to them the resources of the world outside the immediate range of their senses, and stimulate them to explore its possibilities. The child is not always to be a player on a stage that the teacher or parent has carefully set for him ; he has to be prepared to play a part in shifting scenes and to adapt himself to unforeseen contingencies. How he may best do this with safety and an increasing measure of confidence is one of the most difficult problems that teachers have to face. It raises all the issues of freedom and individual responsibility, with their inevitable attendant risks. The thought of these risks is seldom absent from the minds of teachers of the blind, and it is little to be wondered at if at times the fears of the teachers cause a curtailment of the liberty of the children. But in the best interests of the children these risks must be faced ; the children must learn to move about the world and fend for themselves with the utmost degree of confidence and independence to which they can attain, and to meet their fellow-men on terms of mutual understanding. It is so easy, if early training is wrong, for the blind to become sedentary, and to shun intercourse with people outside a narrow circle of relations and friends, and not a few among the blind develop morbid fears of life and society. They can only be saved from this by becoming valiant seekers of experience, who refuse to be daunted by their handicap.

The term experience, then, which we use in our definition of education, is to be interpreted in a very wide sense, and not narrowed down to the conventional routine of school activities. It will include, of course, all the varied activities of the curriculum with which we deal in detail in a subsequent chapter, but the value of the studies in the subjects of the curriculum will only be slight if the children have but a limited store of direct experiences to which they can refer the wider generalizations of formal education.

Into all experiences there enter, in the widest variety of quality and intensity, the elements of feeling, thinking and action. We deal with these elements separately in the sections that follow, though we know that in reality they are inseparable from each other.

CHAPTER 3

THE WORLD OF EMOTION

In some ways the most important factor in any new experience is the emotional tone by which it is accompanied, for the emotion that it evokes determines whether a repetition of the experience will be sought or shunned, and in what manner the experience will influence future behaviour. What we feel about things is the main determinant of what we seek either in the realms of intellect or action. For this reason the first essential of sound educational work is that it should be carried out in an atmosphere conducive to the development of a harmonious emotional life, and that the child should acquire the right sentiments and attitudes of mind towards the ideals of conduct and the various objects of human endeavour and understanding with which education is concerned.

Every individual has innate tendencies to acquire certain patterns of emotional behaviour, and, under the guidance and control of environmental and educative influences, these primitive or instinctive tendencies grow into well-defined temperaments and attitudes of mind. Whether blindness has a direct effect on the emotional endowment of an individual we cannot say, because among the blind can be found all the well-known emotional and temperamental types. Among those who are brought up in the same school environment we find some timid and retiring, others bold and assertive ; some who are intellectually and physically alert, curious and active, others sluggish, inert and apathetic. It is not easy to determine whether the gamut of emotions is wider or narrower for seeing than for blind children or to say to what extent the facts observed about the emotional life of the blind are data of their emotional endowment, or the products of their particular experience.

But competent observers have suggested to us that, although blind people conform to no fixed emotional type, blindness does tend to exaggerate the effects of inborn emotional tendencies, to make the self-assured child more "cocky," aggressive, or vainglorious, the timid child more self-effacing and withdrawn into himself. The blind child is said to be more suggestible, more ready to respond to an atmosphere of elation or despondency, to encouragement or repression. The emotional states of blind people tend perhaps to last longer than those of seeing people because of the relative scarcity of distracting stimuli, and so experiences strongly tinged with emotion tend to make a deeper impress on their minds; and the same absence of distraction makes the blind more prone to become introspective and moody and to yield to the attractions of a dream-life, which in extreme cases may unfit them for grappling effectively with realities. It is a part of the duty of parent and teacher to watch the signs of emotional development, to foster the desirable and restrain the undesirable qualities as they emerge, and to try to prevent the natural proclivities of the children from running to extremes.

For guidance as to how this may best be done, we must look to the origins of the emotional states. Although psychologists are not yet agreed as to the manner in which man's emotions are related to his instincts or natural propensities, it seems at any rate clear that emotional displays are most marked when man's natural activities, whether instinctive or acquired, are trammelled or thwarted, or when their outcome is uncertain. The cravings of unsatisfied hunger are hardest to bear in sight of forbidden food; curiosity, the tendency to be amused, the desire to create are heightened when the natural means of satisfying them are denied. When the issues of a situation are known to be hazardous but important, the emotional state experienced is the more intense in proportion to the danger or momentousness of the issues. If these considerations are well founded, they may well explain why blind children are subject to greater extremes of emotion than seeing children, for the opportunities they have of satisfying their instinctive or acquired urges to activity are far fewer. Their world is more circumscribed, and the confines of the unknown are closer about them ; they are slower in becoming aware of the signs of approaching danger or help ; they are hampered in their efforts to explore the world, and in finding the means to acquire or construct the things they desire in life. Life itself and the means of livelihood are far more uncertain and precarious, and the sense of security which makes for an equable state of mind is not so often their portion. The blind child, standing for the first time on the steps of a residential school, and the young blind person, leaving its doors for the last time, have before them a world of difficulties, uncertainties and dangers which only the most stable emotional disposition will enable them to face unshaken.

If, then, the teacher is to minister to the emotional needs of blind children, he must be first of all a liberator, who seeks to free them from all arbitrarily imposed trammels to all-round activity, and endeavours to widen to the utmost extent the spheres in which they can move independently. Not only is this true of the material environment and of all kinds of physical activity, such as field sports, swimming and dancing, and the common activities of the household and workshop, but perhaps most important and difficult of all, the ordinary sphere of social relationships.

One of the most serious dangers to the temperament of the blind arises from a wrong attitude of society towards them, which induces on their part a wrong attitude towards society. People who are unfamiliar with the blind sometimes assume towards them an attitude of false or fulsome sentimentality that alienates those to whom it is directed. They underestimate the genuine capacities of the blind, try to help and protect them needlessly, and give way to flattery of simple achievements. A blind person naturally resents any unwarranted imputation of social inferiority, and when an unthinking hostess appeals to his seeing companion with such a question as: "Does Mr. So-and-So take sugar in his tea ?" it is only to be expected that he will inwardly protest that he is neither deaf nor dumb. A few unfortunate encounters by an intelligent blind person with such people as these are often sufficient to cause in him a state of rebelliousness and a professed contempt for the seeing. When this rebelliousness and contempt are accompanied by suppressed feelings of envy, emotional conflicts may ensue that will embitter the life of the victim. If the social circle in which a blind child lives is habitually over-indulgent, the consequences are likely to be even more serious than they are with seeing children, because the measure of genuine helplessness and dependence of the blind child is far greater, and the emotional shock of finding itself in a situation that demands instant and independent effort is proportionately more disturbing. Sooner or later such situations must arise in every life, and unless constant preparation is afforded, the results may be catastrophic.

The best safeguard against emotional troubles that are caused by unfortunate social contacts is a freer intermingling of the blind and seeing communities, which will give to each a saner conception of the powers and limitations of the other, and a fuller sense of reciprocal duties. Most seeing people have interests which are not wholly visual that they can share to some extent with the blind; for example, a blind person can discuss bird-songs with an ornithologist, if not the colour and form of birds. Unfamiliarity begets embarrassment out of which arise misunderstandings and unwitting stupidities. Free and familiar intercourse in a wide circle will enable both blind and seeing people to reach a state of balanced relationship in which each gives and takes according to an accepted code of mutual obligation. Where such a state of balance has not been reached, emotional tension cannot be avoided.

In a segregated school for blind children the teachers and other officials stand in a position of special responsibility as representing seeing society at large. From them the children will gain some of the most lasting impressions of the personalities and thoughts and actions of seeing people, and relationships with the school staff will shape the sentiments and attitudes that determine their relations with the wider society of after-school life. If teachers give way to excessive pity or sentimentality, if they allow children to form violent attachments to or aversions from themselves, if they are fussy, overbearing, or too fearful of their charges, all their faults will be registered, perhaps indelibly, in the emotional life of the children around them. In a teacher of the blind, especially, the warmer human qualities of imaginative insight, sympathy and comradeship that go to make all good teachers, must be tempered by a self-control that never allows him to infringe the legitimate desires of the children, and by an outward show of detachment, that never becomes aloofness but allows him to pass in and out of the children's daily activities with a minimum of emotional disturbance on their part.

One of our witnesses wrote very feelingly of the emotional crisis that occurs to some blind children, usually at the age of adolescence, when first they realize fully how greatly they differ from seeing people, and how handicapped they are in pursuing the career on which they may have set all their hopes. When such a crisis has occurred one can well imagine the despair into which the sufferer has been thrown. Such crises, however, appear to be avoidable, for several of our blind witnesses to whom the question was put were unable to recall any specially acute phase of disappointment in their own lives, and our teacher witnesses had not found in their experience that such a realization attacks many children with sudden and overwhelming force. But it is possible that minor crises of this kind are more frequent than may appear from outward signs, and are the more dangerous from being concealed. But be the facts what they may, the matter is one that concerns very closely those who deal with blind children. For if through evasions or false information, given under the influence of misguided pity, the blind child is led to imagine that all his fondest aspirations are easy of attainment, if he has given way to a phantasy life based upon ill-conceived or unreal notions of the world about him, then a rude awakening is inevitable. And even when these dangers are not manifest, and the child is intelligent and healthy-minded, parents and teachers have always to bear the oppressive burden of deciding which of a child's aspirations to a career or mode of life it is safe to encourage, and which it is better not to foster lest disillusionment follow. The only way in which they can be relieved of the stress of this responsibility, and the blind saved from the feeling of being thwarted and undervalued, lies in the awakening of a clearer appreciation on the part of society of the services that gifted blind persons in particular can render, and a greater readiness to receive the blind into full partnership in the affairs of life.

But the ordinary work of education, so far as the emotional life of the pupils is concerned, is happily not concerned with avoiding critical or pathological states of emotion, but rather consists in providing conditions in which the natural and desirable emotions can have free play, and in building up those organized systems of emotional dispositions that we call sentiments. In this work the emotional atmosphere of the school, that intangible expression of the ideals, enthusiasms, activities and general vitality of teachers and children is the most powerful factor. Where freedom, cheerfulness, industry, goodwill and many-sided activity prevail, emotional stresses are few, and temperamental differences find safe ways of adjustment.

An important factor in the emotional development of the child is the æsthetic training that he receives. Only by continued contact with what is intrinsically beautiful will healthy ideals of beauty grow. The blind child cannot share in the delights of visual experience or pictorial art, but it by no means follows that his field of æsthetic enjoyment is hopelessly impoverished. In music, in all the arts of language, in reverence towards the ideals of nobility to which man aspires or has risen, in the sheer joy of living that accompanies mental and physical fitness, in the sounds and scents of gardens, woods, hayfield or moorland, the freshness of the sea and the mountain air, there are realms of spiritual, intellectual and sensuous experience to which he has the freest access. That he should have the opportunity of experiencing these delights is a charge upon those who control his education ; but what they will mean to any particular child it is impossible to predict. For it is not in mere sensuous enjoyment that the value of these things consists, but in the sweep and fulness of their meaning, and the impulse they give to a deeper realization of their purpose. The essence of any profoundly moving æsthetic experience is a revelation of unforeseen possibilities or relationships, and this comes only to a mind already well stored and disciplined. One cannot fully enjoy hearing for the first time an opera or a symphony without a great deal of previous experience of the simpler forms of musical art, nor feel the thrill of a new scientific discovery unless one has laboured in the field to which it relates. Keats would not have fallen under the spell of Chapman's Homer had he not previously travelled much—and arduously—in the realms of gold. The teacher's part is to give the children the opportunity to enter the various fields of æsthetic experience and to foster the sensitivity, skills and knowledge on which all real appreciation is based. Something of his own feelings and enthusiasms he may hope to impart, but whence or when the flash of insight shall come, without which no true appreciation can exist, is a matter beyond his power to foresee or control.

CHAPTER 4

THE WORLD OF THOUGHT

It has been said that if emotion determines the ends we shall pursue, knowledge is what gives us power to pursue them. The word knowledge has many shades of meaning that range from simple awareness of a fact to knowing so well how to do a thing that one does it without thinking. One may know what day of the month it is without feeling the least impulsion to do anything particular about it, and one may know how to write or dance or solve quadratic equations so thoroughly that while one is doing any of these things the mind is free to occupy itself with quite extraneous affairs. Proficiency of this latter kind is a matter of acquiring skills, either physical or mental, and as skill increases the control by conscious thought of the activity concerned gradually diminishes.

Into the acquisition of such skills of mind and body enters the faculty known as "intelligence," and it is a matter of some concern to discover whether blindness affects the native intelligence of those who suffer from it, and if so, in what manner and to what extent. Unfortunately the attempt to answer these questions is beset with many difficulties. There is no agreed definition of the term "intelligence" to which one can appeal as a safe point of departure in the quest for an answer, and the practical method of ascertaining intelligence quotients by means of psychological tests presupposes in those tested a common body of experience which is manifestly lacking as between the blind and the seeing. The experience of seeing people is so intimately bound up with the sense of sight that it is impossible to eliminate the factor of sight, or to introduce into the calculation of intelligence quotients a correction that shall put blind and seeing persons on equal terms. Such investigations as have been made, using from among the items of the Stanford-Binet Intelligence Tests those which depend least upon the sense of sight, reveal the fact that the *average* level of performance among the blind is somewhat lower at each year of age after the sixth than among seeing children, but the interpretation of this fact is by no means simple. In so far as blindness is associated with or caused by diseases of the central nervous system it may naturally be expected to lower the intelligence of an individual person so affected, and to the degree to which such diseases are commoner among the blind than among the seeing one would expect a lowering of the *average* standard of intelligence. But where blindness is caused only by some affection of the external organs of sight there is no *a priori* reason for supposing that it must necessarily entail an impairment of the intellectual powers. The mere fact that among the blind are found persons of a very high order of intelligence suggests that the effect of blindness upon intelligence is neither of necessity large nor invariably discernible.

We may readily admit that blindness limits the sphere in which intelligence may work, and further, that in many respects a blind person's conceptions of the external world must be only partial and may be erroneous, in consequence of which the exercise of his intelligence upon the relationships between the various parts of his knowledge or experience may lead him astray. It is also self-evident that blindness opposes to the acquisition of knowledge difficulties with which the seeing do not have to contend. But if with Professor Spearman we look upon that which is measured by intelligence tests as something in the nature of mental energy, it is just as reasonable, in the absence of positive evidence, to explain the retardation of the blind by reference to the greater resistance that they have to overcome as by postulating a smaller endowment of mental energy. There are undoubtedly certain diseases to which particular cases of blindness can be traced which very seriously damage the sources of mental and physical energy, but if we exclude these special cases there seems no reason why in the present state of our knowledge we should impute to the blind any inferiority of intelligence either qualitative or quantitative ; within the field in which his knowledge is direct or well founded a blind man's intelligence may be as great, and may work as actively and surely as any other's.

We suggest, then, that there is as yet little value in seeking to institute an exact comparison between the degree of intelligence of blind and seeing persons. What we want to know about the blind is not how much more or less intelligent they might have been if they had been able to see, but how the intelligence they actually possess may best be developed. To this end intimate studies of the growth of the mental powers of blind children, showing the kind of materials by which their minds are nourished and the kind of interests upon which they fasten, should prove a far more fruitful line of research than that offered by the tabulation of intelligence quotients computed according to a conventional scale. The value of any research should be rated mainly by the contribution it makes to the improvement of teaching method and the light it throws upon the objectives of training. Such investigations would naturally take account of the causes of blindness, and it may be hoped that a comparison of detailed case-studies of children whose blindness had a like origin would lead in time to the discovery of common mental characteristics ascribable to the common physical factors. This would be of great value to teachers as a guide to educational treatment. For work of this kind the co-operation of teachers and doctors with expert knowledge of the causes of blindness is obviously essential.

Two broad facts as to the intelligence of the blind may be taken as established. First, among blind children there is the same wide range of individual mental characteristics as is found among seeing children ; there must therefore be an equally wide range of educational opportunity and treatment. Secondly, the blind school population contains a somewhat larger preponderance of retarded children than the seeing. Much of this retardation is undoubtedly due to congenital dullness. This fact, though it greatly increases the difficulties of educating the dull blind, should provide an added incentive to exploring the means by which retarded children can be educated. A teacher falls far short of his duties who tries to evade the difficulty of teaching a dull blind child on the grounds that blindness and dullness together render the child's educational prospects hopeless. In proportion as the possibilities of obtaining profitable industrial employment diminish, the need increases for developing all those internal resources of the mind and the external resources of the environment that can contribute to a contented life, and neglect of them becomes the more reprehensible.

In so far then as Intelligence Tests can help to a fuller understanding of blind children's capacities and enable us to compare the mental capacity of one blind child with another's, there is ample justification for continuing to use them and seeking to make them more exact and more comprehensive.

The scale of Intelligence Tests devised by Professor Hayes is undoubtedly a valuable instrument, but it may easily happen that further research will bring to light new tests which will prove a surer prognosis of the full range of a blind child's intellectual and educational capacities than those which are borrowed or adapted from the tests in use for the seeing. It might, therefore, be a misfortune if research workers in this field allowed themselves to be rigidly bound by the Binet tradition of testing. But whatever may be the future of the tests they are even now a valuable means of obtaining a rough grading of children according to their mental capacity, a thing that is essential for correct classification in school, and a most valuable guide to administrators who are responsible for seeing that the blind children of all grades of ability are supplied with the educational facilities best suited to them.

Apart from the questions arising out of differences of mental capacity lie the problems of the manner in which the minds of blind people work when they are in action. What "thinking" actually is no one can say, but the common usage of the word covers many varieties of mental activity. There are, for example, the unfettered flow of thought typified by day-dreaming, the contemplative review of experience by which one attains an intellectual grasp of the meaning and purpose of life, and the conscious direction of thought along possible lines of activity that shall lead to a desired end. The teacher can do little directly to train his pupil's thinking in so far as it belongs to the first two of these categories, though by control of the environment and by fostering a healthy emotional atmosphere he may indirectly exert a most powerful and salutary influence upon it; his own attitude towards the deeper problems of thought will not fail to be communicated in some manner to the children in his charge. From the practical standpoint the most important type of thought is that which is consciously directed to a specific end. This is the kind of thought that the child gives to his studies and to the planning of his daily activities, and it is the basis of that forethought which enables him to look down the longer vistas of life, to plan out a career and design a manner of living. Much of this thinking will be concerned with simple familiar things and will become a matter of mental habits. But the crucial test of the power to think effectively comes when the situation with which a person is confronted is one with which his previous experience has not wholly prepared him to deal, when there is present some doubtful or problematic or novel element that presents a barrier to habitual modes of behaviour or renders such behaviour ineffective. Training to think in this particular sense of the word is specially important for the blind, because their limitations expose them far more than seeing people to unexpected contingencies. The spirit of adventure which we wish to see instilled into blind children will rest upon confidence in their powers of thought, and if a child is to be trained to think he must frequently be faced with problem situations. During the phase of hesitancy in face of a problem one endeavours to recall previous experiences that are relevant to the situation, to analyse the situation into its constituent elements, and to recombine these elements in a manner that allows the unfamiliar element to slip into a seemingly natural or logical relationship with previous knowledge. When this has happened one has a scheme of solution on which it seems safe to act. For thinking of this kind the three essentials are, first, some real experience of a kind similar to that with which one is confronted; secondly, an understanding of the associations that hold between the various factors of the past and present experiences; and thirdly, the power to bring past and present experiences into harmonious relationships.

Blind people, like all others, can think effectively only in terms of knowledge securely based upon their own sensory experience, but it is necessary to consider whether apart from the limitations due to their more limited sensory equipment their thought processes differ in any essential way from those of seeing people. Except for differences in the imagery that they employ there seems no reason to suppose that there is any fundamental difference. The same concepts, generalizations, abstractions, the same modes of expression, the same laws of logic serve both ; a dog is a dog, a cat a cat, to blind and seeing alike, and so is a Public Library, the law of gravitation, and the British Constitution. Such concepts may be fuller in meaning to the seeing because of the visual experiences with which they are associated, but they stand for the same things. There are some grounds for thinking that the mental powers of the blind unfold in much the same manner and only at a slightly slower rate than those of seeing people, but this field of inquiry has not yet been thoroughly explored. Nature seems to have imposed no obvious limitations to the mobility of the blind in the world of ideas, though doubtless without contact and co-operation with the seeing they would have had different and more limited conceptions of what the world at large appears to be, and further, as we shall discuss in a later section, a large proportion of their knowledge of the world has to be obtained at second hand.

Nevertheless a great deal of thought has been expended upon the subject of the imagery that the blind employ in their thinking. From the theoretical standpoint this is a matter of great interest, and a solution of many of the problems it presents is perhaps an essential step towards the perfection of educational methods ; but it is doubtful whether any general conclusions of real practical value can as yet be made. It seems to a seeing person that the idea of a chair must inevitably call up in the blind person's mind some kind of tactile imagery of back, or seat, or cushion, but blind people are by no means agreed as to the terms in which they conceive such a thing. As with seeing people the appearance of sharply defined imagery is so fitful and even apparently so capricious, that it is difficult to know whether the images are the real vehicle of thought or mere by-products of the thinking. It is no doubt tempting to regard the thought process as a kind of shadow-show, in which pale phantoms flit across the stage of the mind and rehearse the deeds that we hesitate to put into action, but in waking life at any rate the images, if any there be, are usually too dim for even the keenest introspectionist to follow, and so the real nature of the thought process still eludes us. It is extremely difficult for anyone to say of what his concepts of even the most commonplace things consist, but it is usually sufficient guarantee that a concept is genuine if, in the words of a recent writer, the person knows " what to do about it." So while it is important to recognize that children's talents differ, that some learn more easily through the ear and others through the sense of touch, and that every idea is the richer for being compounded of impressions derived from all the relevant senses, as yet it is probably enough for practical purposes to supply the incentive and the means to thought or action and leave the imagery to look after itself. Many generations of successful teachers, who have had little direct concern with the problems of imagery, would testify that there is at any rate a sound core of pedagogical practice in this.

For the teacher the problems of language are of greater immediate importance than those of imagery. Though in itself it is a form of action, language is both the instrument by which the higher forms of thought have been developed and the chief medium for communicating thought. The language that the blind have to employ is one that has been evolved to suit the usages of a seeing world, and it contains many elements that relate to matters outside the experience of those who have never seen. It is far richer in words that connote visual impressions than in words descriptive of touch or muscular effort or smell, and is therefore a comparatively imperfect instrument for expressing the direct experience of the blind. In structure and function it is well enough suited to them, but its vocabulary is in part unreal. This unreality is a pitfall to both the seeing teacher and the blind pupil. The teacher may talk in language that has no meaning to the pupil or evokes in his mind ideas totally different from those which it was intended to convey ; the pupil, who can seldom prevent himself from attaching some meaning to what he hears, may accept his misunderstandings as realities, and may be tempted to act upon them with awkward or disastrous consequences. A more insidious temptation to the blind is to ape the seeing person's mode of speaking and compensate for a feeling of inferiority by flamboyant but often inept use of words that he cannot really understand. The blind world can show many examples of persons who have a pompous style of speaking and an overweening fondness for long words.

The question of verbalism, by which we mean the habitual or excessive use of words that have no underlying basis in real experience, is a very acute one in the education of the blind, but there is perhaps a tendency to get it a little out of perspective. The faults of verbalism are by no means confined to blind people and blind education. There are many seeing people who get a wholly unmerited reputation for knowledge by the use of catch-phrases and well-worn formulas of speech that betoken only a quick ear and a glib tongue. Being handicapped by their limited sense-equipment, the blind necessarily get more of their information about the world through knowledge by description and less through knowledge by acquaintance, than the seeing, but in this the difference between them and the seeing is only relative and not absolute. We all carry a large load of verbal knowledge, much of it vague and some of it inaccurate, that has little bearing upon our daily life. The ordinary man's knowledge of the social life of Elizabethan times or the climate of Japan may be extremely sketchy or even misinformed without any dire consequence to his personal prestige or his usefulness as a citizen. It is only when verbal knowledge is used as a basis for mental or physical activity on one's own part or for influencing that of others that its insecurity becomes a danger. In the superficialities of human intercourse a great deal of doubtful verbal knowledge readily passes muster ; it is the practical issues of one's thinking that reveal whether the thoughts correspond with reality or not. We cannot blame blind people for using words that denote visual experience ; they can no more avoid hearing of red bricks or green vegetables than of filthy lucre or sound Conservatives, and there is no reason why they should not use such phrases if they have reliable hearsay evidence that they are appropriate. Only when it betokens insincerity and a morbid depreciation of their own sensory powers, is verbalism of this particular kind dangerous.

The cure for verbalism is not to condemn as worthless all verbal knowledge. No one can have direct experience of more than a minute fraction of the things with which space and time are crowded. The way to deal with it is to develop more fully the resources of the language that pertain to the experiences of the blind, to encourage them to seek experience and to see that with the experiences they are given the vocabulary that describes it. If the blind would sturdily resolve to stick to the terms of their own sensations and imagery and eschew the hackneyed phrases of seeing writers, they could much more easily achieve the vividness and sincerity that characterize all good speech and writing, and they could greatly enrich the resources of our language and literature.

In the world of thought to which we wish the blind to have free access they will encounter many words that stand for things that they will never meet in reality and they will have to get working conceptions of them by the outward projection or recombination of ideas that they have gained from direct experience. For example, they may never come within reach of a sky-scraper or mine-shaft, but a journey up and down a lift will serve as a basis on which they can compare the heights or depths of these things ; a visit to the tropical houses at Kew and the parrot-house at the Zoo will provide them elements for a conception of an equatorial forest. But this is only the kind of thing that seeing people have to do, and the further one goes into the thoughts by means of which man endeavours to explain to himself the nature and purpose of the world about him the freer is the use of words which stand for things that lie beyond the reach of direct sense-perception ; for instance, atoms, photons, genes are words that connote most valuable ideas, but the realities behind them, if such there are, are far removed as yet from human sense. We must therefore not be afraid of verbal knowledge, but we must ask of blind pupils an intellectual honesty that is not content with hazy and slipshod notions, but insists on definitions of ideas in terms clearly comprehensible to themselves.

To sum up, right thinking is that which has stood or will stand the test of action, and the independent planning and carrying out of daily activities is the surest means of training the children to think. Throughout school life the child must be trained to plan activities that have a wider and wider scope and a longer and longer time-range, and by slow degrees he must be led up to the planning of a career. This is the most important practical issue to which schooling leads, and no other calls for more honest and courageous thinking. It must always be borne in mind, for in the end it cannot be shirked.

CHAPTER 5

THE WORLD OF ACTION

The world of action is particularly important from the point of view of the educationist. He cannot wholly determine what children shall feel or think, but he can and does frequently prescribe what they shall do, and he can judge the effect of his training by direct observation of their actions, whereas he can only guess their thoughts and feelings. It is inevitable that parents and teachers should be largely preoccupied with training children to do things, because ordinary living and social intercourse and the earning of a livelihood are dependent upon the possession of certain learned reactions and common skills, most of which have to be mastered in childhood. To wash and dress oneself, to use a knife, fork and spoon, to talk and read and write, to manage simple financial transactions, to find one's way about the world, to handle tools and domestic appliances, these are things that all must learn to do, whatever one thinks or feels about them.

The limitations of blindness have a more easily observed effect upon physical activities than upon emotion and thought. Except in total darkness blind people have a smaller field of sense-impressions than the seeing and a smaller total realm of sense-experience ; their activities tend therefore to be less varied, though they may on occasion be more intense and concentrated. Many stimuli that prompt seeing people to action pass unnoticed by the blind, and because the blind have fewer incentives to variations in behaviour their occupations more readily become stereotyped and bound by a narrow routine. In the little unconsidered acts of daily life, in the free play of children, in the occupations of idle moments as well as in the more purposeful activities of life, the eye continually supplies the impulse to new modes of action on which are based new powers of muscular control and fresh resources of the mind ; through the lack of these impulses the blind may seem in comparison to be unresponsive and immobile. The means that the blind have of exploring the world about them are slower, more uncertain and more fatiguing ; to know the disposition of the furniture of a room or the contents of a tool-box means to them a long series of movements and tactile explorations. The blind are less able to foresee physical contingencies and so must be more cautious ; they are unable to move in unfamiliar surroundings with complete freedom, and unless their circumstances are particularly favourable they tend to become sedentary in habit. They are more at the mercy of casual disturbances in the order of things about them—a missing collar-stud is a more serious matter to them—and in many ways they are inevitably dependent upon others for acts of personal service.

These considerations are significant as showing the direction that educational effort must take and the kind of material provision that must be made for educating the blind. To the limitations that blindness imposes on the children the school must reply with a spacious environment richly stocked with all that will appeal to their senses and help them to satisfy their creative impulses. To overcome the tendency to a narrow routine the school must foster by all possible means inventiveness and versatility. It must aim at the highest possible degree of physical fitness and vigour, both to prepare for the arduousness of learning without sight and to combat the temptation to an inert and sedentary life. It must instil into its pupils a sense of order so that their possessions shall be readily accessible ; this involves, of course, that the children shall have things of their own and places in which to keep them. And with all these things the school must set before the children an ideal of active service for others so that the debts that they must incur because of their dependence may be paid in the fullest measure possible to them.

Of the foregoing considerations one of the most important and the one which is most readily within administrative control is that which refers to the nature of the material environment of the schools for the blind. If the blind are educated under cramped and disabling conditions they will themselves be thwarted and inactive. The active life comes not merely from some inner motive source but from a conditioned response to the insistent call of external things. The cricketer's response to the call of May, or the hunting man's to that of an October dawn, owe their origin and force to a long succession of remembered experiences, mostly joyous experiences of childhood and early youth ; in their absence the call would go unheeded. Because the blind are so handicapped in going out into the world to seek their activities, as many and as varied opportunities as possible must be brought within their gates. What the blind need in their school is not less space than the seeing but more, both indoors and out ; not bareness but a profusion of things that will tempt them to action. They must learn to find their way in open and enclosed spaces, to deal with tortuous ways, to locate and circumvent obstacles. Their playing fields should contain not only open games pitches, but trees and shrubberies, sandpits and paddling pools, and places where the children can dig and build to their hearts' content, even at the risk of a little untidiness here and there. The children should have access to discarded materials such as bricks, planks, poles, boxes or canvas, with which they can build the huts or dug-outs or encampments of their world of make-believe, and re-enact the scenes of folk-lore or fiction. Their playgrounds should be equipped with apparatus that will tempt them to simple feats of skill and strength. There should be places where small domestic animals and pets can be kept, and for the care of these the blind pupils should assume as they grow older an increasing responsibility, so that they may answer to the stimulus that such things provide for daily and seasonal activities. The realization that other lives or life-processes are dependent upon the part that the children themselves are called upon to play is one of the most important lessons that they have to learn, for in its most generalized form it embraces many of the acutest problems of modern civilization.

In the domestic life of the residential school there must also be occasion for many activities, both routine and casual. For matters of personal cleanliness, care of clothes and boots, the orderliness of the sleeping quarters and personal belongings, the children will have increasing responsibility as they grow older. They can in turn undertake simple monitorial duties in the dormitory, dining-room and classroom, and for the supervision of simple matters of discipline the older ones can take the office of prefect. To the fullest extent compatible with the smooth running of the household the children should be introduced behind the scenes of the kitchen, the laundry and the catering departments so that they may learn as much as possible of the background against which their cloistered life is set.

The provision of ample facilities for indoor recreations is important. There must be rooms in which the children can play their games or work at their hobbies, and the equipment must suit their ages and tastes. For the very young there should be a good supply of toys, many of them of a large, realistic kind, dolls that the girls can dress and undress and put to bed, toys that can be taken to pieces and put together again. As the children get older, constructional toys will be valuable both for cultivating a sense of how simple mechanical or electrical contrivances work, and also for giving practice in fine muscular movements, such as are required, for example, in adjusting nuts and bolts with the fingers or a screwdriver. Later the boys will learn in the woodwork-room to handle the hammer and saw and plane and to do rough carpentry, while the girls should learn the simpler processes of cookery and laundry and household management.

Classrooms also should be spacious ; the furniture should be light and not crowded together ; the cupboard provision should be generous and designed so as to be accessible in all its parts to all the members of the class. Even less than in schools for the seeing should the tradition be that the children stay where they are put, to be waited upon by the teacher ; their classrooms should be places that they feel to be their own, where they can go about their work with no restraint except that which is imposed by the right of their fellows to pursue their tasks in an undisturbed atmosphere.

Training in social accomplishments, especially such as can be shared by a mixed company of blind and seeing, must also have its place. With this aspect of their training we deal more fully in the chapter on Problems of Later School Life (p. 210), at which stage it is specially important. But before that age the children should have as many opportunities as possible of learning how to greet and entertain strangers, both children and adults. If as young children they have learned to get rapidly on easy terms with others, know how to behave in the position of guest and host, and generally to behave normally, many shynesses and inhibitions in later years will be avoided. But notwithstanding all that may be done in the way of training the blind for everyday activities there will always remain some things that are too difficult for them, or that demand time and effort that can ill be spared from more important parts of their training ; the question will arise with each child how far it is profitable to try to make him competent in these more difficult operations. Many such operations recur continually in ordinary domestic and social life. They belong largely to the more complicated two-handed tasks, in which the blind are at a disadvantage because they feel the need of a third hand to watch. The handling of a knife and fork is difficult for the blind and requires a much more prolonged training than with the seeing, but it is not beyond the capacity of most blind children so long as the food to be cut presents a straightforward job ; to take the bones out of a herring is too much to ask. The matter is sometimes complicated by social conventions, and it is important that the child shall be trained to act in a manner that does not call for social disapproval. No child would have any difficulty in dealing with a chicken bone if left to his own devices ; to carve it elegantly is a different matter. Training in even the simple things that the blind can do quite adequately when shown, such as distinguishing between bank-notes or picking up a sandwich with one hand only, is a great consumer of time, and exactly where the line must be drawn between things that they could do fairly adequately after prolonged training and things that they could never do really satisfactorily must be decided by reference to the natural aptitudes of individual children and in part by their own powers of determination. There will always be hardy spirits who will insist on trying to master the most difficult jobs, and they must not be discouraged.

It may be of interest to quote a list of " odd jobs " given to us as typical of what a particular totally blind man is able to do. Others could doubtless give lists covering a different range of operations, but the contents of even the one list suggest that a comprehensive account of the capabilities of the blind as handymen would be really impressive in its scope and variety. The list is : putting on a tap washer ; making and fitting spring for petrol lighter ; fitting stair-rods and laying carpet ; putting up shelves and curtain fittings ; repairing flexible electric connections, fitting fuses and electric bells ; cleaning and adjusting lawn-mower ; rough cementing and general rough carpentry ; putting spring in door lock ; oiling and cleaning sewing machine ; adjusting the hang of doors ; assembling beds.

It would be unprofitable to attempt to enumerate all the skilled actions that even the blind have to learn in order to serve the needs of the passing day, and to do so would only be to incur the danger of obscuring a more vital issue. What matters more than the possession of particular skills is the manner in which the skilled activities are combined and organized so as to become a permanent and indispensable part of the life-activities of the individual. A skill is useless without a lasting purpose to sustain it. How often one hears it lamented that skills that have been mastered at school, whether in reading or music or crafts or games, have been lost because the life that the person desires or is compelled to live has no place for them. Far more important than the cultivation of skill in reading is the creation of a life-interest which will make frequent recourse to books necessary, and the same principle holds in every branch of education. Skills that have been learnt merely under the compulsion of the school without becoming linked to the natural propensities of the child or brought into an established relationship with the paramount interests of his life inevitably wither when school life is over. It is only when the skilled acts have become an integral part of the larger behaviour patterns that dominate the life of the individual that they are likely to endure. The condition of survival is that of becoming lost in a larger whole, and it is to the neglect of these larger wholes that many of the failures of formal education can be attributed.

The secret of training for an active life is therefore that of providing the kind of experience by means of which various separate activities can be combined into purposeful wholes. The methods used will vary with the age of the children, but throughout school life and after, the most fruitful occasions for such development will be those in which the initiative comes from the child, though the inspiration may come from elsewhere.

With young children one of the chief resources will be that of dramatic play, by means of which in imagination they assume other personalities and perform the actions that they think appropriate. The child as a rule needs no external compulsion to initiate or join in such play, but blind children in particular need to have about them someone with an inventive mind to suggest new possibilities of play and also a good stock of " properties " with which to carry them out. Indeed, one good test of the suitability of the blind child's environment would be the number of different modes of life that it enabled him to represent and the number of different characters he was able to portray with a satisfactory amount of realism in the matter of costumes and appurtenances. Everyone who has intimate knowledge of the life of young children will testify to the importance of this part of their training ; most families have long-remembered and treasured traditions, and most children seem to go through the same phases. They may begin with solitary performances, such as the muffin man with his bell, and pass to others for which they must have numerous but relatively unimportant collaborators, such as the 'bus conductor with his ticket punch, the railway guard with his flag and whistle, or the postman with his letter-bag ; and so on to the more socialized games of keeping house or shop or school. Then come the ages of construction in which they make houses and wigwams, make-believe boats, trains or aeroplanes, and of adventure when they play at fearfully armed pirates or Red Indians or shipwrecked mariners, and re-live the scenes from their favourite stories. To put their phantasies into action and not to be content with day-dreams is a sign of health in children, and the blind child more perhaps than any other needs continual incentives to break the closed circuit of unexpressed ideas. By no better means can this be done naturally and spontaneously than through the medium of dramatic play.

The more formal type of dramatic work that leads up to the production of stage plays has also a place in the education of the blind, but the interpretation of a fixed rôle through the medium of set terms of speech and action is a more exacting discipline and demands a greater maturity of mind than the re-creation of familiar scenes and incidents in play. The blind cannot attain to full command of dramatic action, gesture, or facial expression, and a blind audience must depend, like the listeners to a wireless broadcast play, entirely upon the effects of sound. We may remark in passing that the technique of writing and producing plays for wireless audiences and for blind people have a great deal in common, and in the field of broadcast plays the blind might find scope for valuable work both as critics and creative artists. For children in school the chief value of performing plays lies in the command of language that it fosters and the power it gives of modulating the voice to convey the full range of emotions and their finest shades. Depending as blind people do upon their sensitiveness to subtle gradations of tone in the voices of the company they meet, it is important that they should also master the art of modulating their own voices so as to be as skilful in producing the effects they desire as they so often are in discerning the unspoken meaning in the voices they hear. It is upon the arts of speech that the blind depend for keeping in touch with and influencing those around them, and no means of making their speech a stronger and more sensitive instrument should be neglected.

In the task of co-ordinating various skills and building up lasting interests, the playing fields and the rooms for hobbies and recreations will play a part. Group and club activities, such as those of Scouts and Guides, are also most valuable, as they form a link between the world of make-believe and that of real affairs. The schoolroom should play the greatest part of all, but it will do so only if the children come to identify themselves with the purposes of the school, and to use the things that the school teaches in the pursuit of their own interests. In order that they may make the school's concerns their own it is essential that they should have some independent stake or responsibility in them, a principle that is recognized in the many experiments at self-government in schools that have been made in recent years. In so far as these experiments relate to the planning of the day's classroom work, or of a part of the curriculum, they have not yet been extensively tried in schools for the blind, though modifications of the Dalton Plan have here and there found a place. There is reason to think, however, that some measure of self-government and self-direction in school work would be even more valuable to the blind than to the seeing, because blindness can so readily become an excuse for refusing to accept risks and responsibilities. The very difficulty of the task of working out a scheme by which the blind child can be given a fitting measure of responsibility in his school life is an indication of its importance. We should like, therefore, to see an increase in the number and scope of the attempts made to give the children themselves a greater share in planning and organizing school activities, for only in this way can the children be trained to face the larger responsibilities of later life with a bold and independent spirit, and only in so far as they succeed in incorporating school activities in a plan of life of their own conceiving are they likely to realize the full value of the work that they do in school.

Of vocational training, which is more fully discussed elsewhere in this Report, we need only say here that the closest consideration must be given to ensuring that the interests and habits of work and study that have been acquired in school shall become established in the lives of the vocational trainees. It is in the period of later adolescence that many of the most lasting interests of life emerge, and it is essential that these interests shall draw into themselves all the resources that have accumulated in the school life of earlier years. If the habits of school life fail to survive transplanting into the environment of the training institution, there is little hope that they will be fully resuscitated during later adult life, and if the facilities for general education are withdrawn or neglected during the period of vocational training, much of the work done in school may prove to have been done in vain.

Having now reviewed the education of the blind under the separate aspects of emotion, thought and action, it remains only to ask to what manner of life, considered as a whole, it can lead, and to what extent educational effort has hitherto justified the hope of a still fuller realization of personal and social values. Let it be admitted that there have been and no doubt still will be failures ; they are an abiding challenge to our efforts at improvement. But if proof of success were needed, it would have sufficed us to look only at the kind of lives that our blind witnesses and many others with whom we have come in contact during the inquiry are leading, to show that a life rich in emotional content, in intellectual achievement, and in varied and absorbing activity, is not the idle dream of a theorist, but an actuality that has been realized by many blind men and women. The limitations of blindness are many and irksome, but they do not prevent the blind from finding a way of life that is in the best sense worth living, both because it enables them to put their personal gifts to worthy uses and because it wins for them the gratitude, respect and affection of those who know them.

PART III

EDUCATION AT VARIOUS STAGES

CHAPTER 1

THE CURRICULUM: AN INTRODUCTION

The problem of the curriculum may be approached from either of two broad standpoints. One may consider the rounded whole of the knowledge and experience of the human race, and seek to epitomize it in the life of the growing child; or one may develop the school curriculum from a consideration of the present experience, interests, and activities of the child himself. These approaches are complementary, rather than opposed. They are both important, and the one is required to correct the other. Perhaps the former stresses the goal rather than the means of attainment, and the latter stresses the starting-point more than the goal.

The former standpoint gives us the view that the school must reflect civilization as a whole, and that the purpose of the curriculum is to organize and epitomize the experience of mankind, so that the child may enter into his heritage of culture. The curriculum is, in short, the embodiment of the capitalized experience of the race. The child must have as much direct experience as possible of life's situations and problems; but clearly, if the object of bringing him up to the present-day level of culture is to be achieved, much of his experience of the activities of mankind must be of a vicarious nature. Hence he needs the arts of language, reading, and writing, for it is through these arts that racial experience can be foreshortened and transmitted.

Those who accept this view of the curriculum as primary must undertake the task of analysing human experience. A preliminary analysis is obtained from the reflection that man has had experience (*a*) of his physical environment, and (*b*) of his fellow-men. So the curriculum ought to include (*a*) the sciences and (*b*) the humanities in the broadest sense of the term—literature and the arts generally. Sir T. Percy Nunn gives a more detailed and helpful analysis. Standing on the position that the curriculum must represent all the typical activities of man, he proceeds to describe what these activities are. They

> " fall naturally into two groups. In the first, we place the activities that safeguard the conditions, and maintain the standard, of individual and social life, such as the care of health and bodily grace, manners, social organization, morals, religion ; in the second, the typical creative activities that constitute, so to speak, the solid tissue of civilization. The activities of the first group cannot, from their nature, be treated as 'subjects,' though they should be inspired and nourished by the pupil's studies, and must to a varying extent be guided by definite teaching."

Considering the activities of the second group, Nunn finds that

> " every complete scheme of education must comprise (1) literature, including at least the best literature of the mother-land ; (2) some forms of art, including music, the most universal of the arts ; (3) handicraft . . . ; (4) science, including mathematics, the science of number, space, and time. History and geography should appear in it in a double guise. On the one hand, history belongs with literature, as geography belongs with science. On the other hand, they should have a central position in the curriculum, as the subjects in which the human movement is, as such, presented and interpreted."

We reach a similar conclusion if we base our analysis on the threefold division of experience into (*a*) doing and striving, (*b*) knowing and thinking and (*c*) feeling. Following from this, it would seem that the curriculum must represent (*a*) what man does. The major crafts of mankind must be included, especially those that subserve the fundamental needs of food, clothing, and shelter. The tool crafts must find a place, also the decorative arts that grow out of man's solution of practical problems. Again, the curriculum must comprise (*b*) what man thinks. His major ways of thinking must be represented, so we must have language and literature, mathematics and science, history and geography. Finally, we must have represented in the curriculum (*c*) man's typical modes of feeling. Music, poetry and art create values in human life, and contribute much to the joy of living. It is important to lead the child to a true appreciation of these values and enable him to feel aright.

Turning to the second view of the curriculum, we find Professor John Dewey as the leading exponent of the doctrine that the centre of gravity must be in the child, rather than in the teacher, the book, the subject, or even human experience and knowledge as a whole. The school ought to be life, rather than a preparation for life. Activity is the essential characteristic of childhood, therefore let the child be active and happy. Start with him as he is, and let the curriculum be based on his natural activities and interests. There are few things in education more depressing than the contrast between a keen, alert child of 5, eagerly seeking experience, and a dull, older child who is content to be directed in everything, and to accept passively what is given him. So Dewey protests against formalism, and works out to its logical conclusion the doctrine that all learning is active, not passive.

Instead of determining the curriculum from the standpoint of subject-matter, he bases it on "those fourfold interests—the interest in conversation, or communication ;

in inquiry, or finding out things; in making things, or construction; and in artistic expression." These interests are "the natural resources, the uninvested capital, upon the exercise of which depends the active growth of the child." The arts of reading, writing, and counting are required to follow out these interests, and children desire to master them, not as ends in themselves, but as tools. They must ever be subsidiary to the activities themselves, but they will surely find their proper place.

> "The problem here is then (i) to furnish the child with a sufficiently large amount of personal activity in occupations, expression, conversation, construction and experimentation, so that his individuality, moral and intellectual, shall not be swamped by a disproportionate amount of the experience of others to which books introduce him; and (ii) so to conduct this more direct experience, as to make the child feel the need of resort to, and command of, the traditional social tools, furnish him with motives, and make his recourse to them intelligent, an addition to his powers, instead of a servile dependency. When this problem shall be solved, work in language, literature and number will not be a combination of mechanical drill, formal analysis and appeal, even if unconscious, to sensational interests; and there will not be the slightest reason to fear that books, and all that relates to them, will not take the important place to which they are entitled."

So Dewey shifts the basis of the curriculum from subject-matter to the realities of life. For him, the content of the curriculum is occupations selected from different life-activities according to the natural interests of the child, at different stages of his development. The school should be like an ideal home, where the child learns inevitably and naturally, by participating in the home occupations. But the school can be more systematic than the home, and select its occupations entirely from a consideration of the child's present and future good.

Such a doctrine is entirely wholesome, and is always an emphatic protest against passivity, formalism and verbalism in education. It guards against any neglect of the child himself and his interests, and it refuses to have a stereotyped curriculum out of touch with real life. There is no danger here of the curriculum being divided up into "subjects," for the activity doctrine pulls firmly together the whole process of learning. The unification of the curriculum is achieved if the problem is approached from the standpoint of the child, for he himself is the unifying factor. But there is a certain danger that educators, in following it too zealously, might neglect the future of the child, and lose sight of the goal. Child-activity must not be regarded wholly as an end in itself. For, after all, an important function of the school is to prepare for life in the larger world. When the last word has been said about the importance and significance of the present life of the child, it remains true to say that he must be prepared for struggle, for social contacts, for leading and being led. He must learn the attitudes of others towards himself. Further, he must be prepared for the prosaic business of being economically self-sufficient, for earning his own living. If we follow Dewey's lead, we must interpret him correctly, and think of the future as well as the present life of the child.

Again, while Dewey rightly protests against formalism, there is a danger of the reaction going too far. Formal education ought not to be excluded entirely from the school. No doubt, in the early stages especially, it ought to occupy a subsidiary place, and certainly it must always be related to the child's own purposive activity. But there is no objection to formal teaching if the child sees the meaning of it and desires instruction. The justification of a certain amount of formal treatment of subjects in school is the necessity of distilling the essence of the experience of the race. Capitalized knowledge and experience must be stored up for future use, for we are concerned with the child's future as well as his present. The task of the educator is, after all, to analyse experience, and to select those experiences which the child will most profitably undergo in school ; and this will involve a certain amount of separate treatment of "subjects." But the child himself must be let into the secret. There must be for him a direct, purposive attack on clearly realized problems. His education must not be a long meaningless period of preparation.

The above considerations bearing on the curriculum apply equally to blind and seeing children ; at most there will be a difference only in emphasis. The blind child, like the seeing, is a seeker of experience, and has an equal right to enter into his heritage of human knowledge. But there are many special problems relating to the education of blind children. As seekers of experience they are seriously handicapped by their physical disability. How can they be helped to make good this handicap ? It is clearly a major duty of the educator to supply those aspects of human experience from which the child by his blindness tends to be cut off. Things taken for granted with seeing children cannot be taken for granted with blind children. Educators must very carefully and systematically supplement the normal experience of blind children, remembering always that they have to live their lives in a seeing world. It would seem particularly important to encourage blind children to cultivate a challenging and courageous attitude towards life ; to urge them to overcome difficulties, and not to pass ordinary things by with imperfect knowledge.

In the case of many, perhaps most of the blind, it may seem impossible to approach the ideal goal of the curriculum, namely, the epitomizing of the best and most worthy achievements of the human spirit. So we would do well to stress in our blind schools the doctrine of Dewey. Certainly it is of prime importance that the curriculum should be based on activities, and that a passive attitude on the part of the learners should be emphatically discouraged. The learning should be informal to begin with, for the most important thing is to supply a rich and full background of experience. Reading, writing, and arithmetic should be taught as they are required by the child's interests and activities. If a child is admitted at an early age, it may be desirable that his first years in school should be freed altogether from the formal teaching of Braille, and the special machinery of counting employed by the blind.

At a later stage, the future of the blind child in general, and his vocation in particular, must receive special consideration, and determine the content of instruction to some extent. For in this respect, much more than the seeing child, does he need direct guidance and help.

CHAPTER 2

THE PRE-SCHOOL CHILD

The Maternity and Child Welfare Act, 1918, gave powers to Health Authorities to attend to the health of young children from birth up to the age for attending school, by means of Infant Welfare Centres, Day Nurseries and Health Visitors. Blind babies are less liable to be overlooked than children suffering from other defects. Children whose blindness is the result of ophthalmia neonatorum or other congenital defect will be known to the health authorities at a very early age. Ophthalmia neonatorum was made compulsorily notifiable in 1914 as an infectious disease. The case of a blind baby is immediately reported by the midwife and treatment is secured either at a city hospital or other similar institution. Under some authorities, nurses from the local eye hospital visit the home and show the mother or responsible person how to carry out the treatment prescribed. Records of the case are kept for future reference. Parents are encouraged to take their children to the Infant Welfare Centres where advice is given on diet, sleep, home environment and treatment for general ailments.

Ascertainment of eye defects largely depends on the observation of the parent, health visitor, district nurse or home teacher. Early records of the child's eye condition can be studied and a watch kept for future developments. Some Authorities institute a systematic "follow-up" of cases of defect when these are recorded.

The Chief Medical Officer of the Board of Education in his Report, *The Health of the School Child* (1931), advocates co-ordination between the Maternity and Child Welfare and the Local Education Authorities. This has been carried out by a number of authorities, and the facilities available for school children, i.e. examination by an ophthalmologist and appropriate treatment, are available for the pre-school child.

County Councils and Local Authorities are empowered by the Public Health Act, 1925, to make such arrangements as they think desirable, subject to the consent of the Ministry of Health, to assist in the prevention of blindness. Their powers include, in particular, the treatment of persons within the area who are suffering from any disease or injury to the eye.

The present position is described in the following statement from the Report of the Consultative Committee on Infant and Nursery Schools (Board of Education):

> " In general it would appear that while much has been accomplished for infants up to the age of about one year or even later since the passing of the Maternity and Child Welfare Act, 1918, much remains to be done in many parts of the country to ensure a measure of continuous supervision of the physical health and welfare of children from this age up to the age of five."

It is generally accepted that the best and most natural place for a child under 5 years is at home. One of our witnesses, with a long experience of the blind of all ages, stated: " The ideal environment of the blind baby during his whole pre-school life should be his own home, provided that he can have intelligent care, instruction by the home teacher, and adequate follow-up by her." No doubt there are homes where the blind baby will receive the right nurture and training, but the rearing of such a child is to some extent a specialized task, and many parents feel unfitted to meet the difficulties without help and guidance. Such guidance should be supplied by the home teacher employed by the local Association for the Blind.

It is of great importance that there should be close co-operation between the Health Department and the local Association for the Blind. It is the duty of the home teacher to support in every detail the advice given by the Health Visitor in respect of the physical needs of the child, and to urge, if necessary, the regular attendance of the baby at the Infant Welfare Centre and the observance of the treatment prescribed. By friendly and homely guidance and advice the home teacher can help the parents to meet any special difficulties in the training of the baby and to overcome tendencies either to spoil or neglect the child. She will urge the necessity of teaching the baby to walk, talk, and play with other children and will advise as to the choice of toys. Simple pamphlets on the training of the blind baby may be recommended to the mother and the points discussed during the visits.[1]

The importance of the work in this special field is well expressed by Miss Grace Owen in her pamphlet, *Education and Nursery Schools* :

> " The work of psychologists—notably William McDougall—has focused the attention of the students of early childhood on the importance of primary instincts and their early modifications, resulting in a corresponding determination of habits of body, of thought and of feeling, all significant as the very basis of character. The period from two to five years of age is thus a crucial period for subsequent development. The little noticed beginnings of development are then taking place in all directions, and by the time all this is over some of the life habits of most far-reaching importance have been set for good or ill. Attitudes of mind also have been established insensibly, with all the advantages and durability that the lack of any competing habits or past experience give ; thus the influence of these years persists. Since we now know something of the seriousness of the injury which may be wrought in the mental and physical life of after years, by such a thing as sup-

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[1] N.I.B. Bulletin, No. 6, *Care of the Blind Baby* (price 3*d*.).

> pressed fear in early childhood, we can reasonably deduce how far-reaching in helpful influence on the other hand is the happy, healthy, well-ordered environment which may be provided for every little child by the right kind of home and nursery school."

Ample opportunities should be given to home teachers to visit schools for the blind (especially the Kindergarten departments) and Sunshine Homes. Discussions between school and home teachers on sense training would be valuable. Kindergarten teachers, other than those in Sunshine Homes, have few opportunities of studying the blind baby. Research and case studies of blind babies would give valuable help in the work of blind education.

The growth of interest in the problems of the pre-school life of blind children is illustrated by the fact that the World Conference on Work for the Blind, held in New York in 1931, gave place of honour to a paper on the psychology of the pre-school blind child. At a Conference held as long ago as 1914, Lady Campbell (Hon. Lady Superintendent of the Royal Normal College for the Blind from 1875 to 1912) showed that English teachers were becoming increasingly aware of the needs of blind babies, when she gave voice to their experience in the words :

> " Many of the children enter our schools inert, awkward, helpless, timid, wanting in strength and decision of character, younger by two or three years than their ages indicate."

thus revealing the need for pre-school education, and foreshadowing the policy that has since evolved.

We have already said that blind babies should be brought up in their own homes, wherever these homes can provide the right nurture and training ; but we cannot ignore the fact that in certain homes the conditions are such that the child suffers irreparable physical and mental harm during the early formative years. Where the home environment is faulty, where in spite of the Welfare Services the parents either ignorantly or wilfully neglect proper care and training, where overcrowding results in insufficient sleep, fresh air and sunlight, where the food is bad, the only hope for the blind baby lies in its removal to a residential Nursery School.

The fact that the Nursery School organization has grown up apart from the ordinary blind school system calls for some comment. One result has been that within the age-range of 2–5 years that measure of concentration of the children has been achieved which we believe to be best for schools for the blind in general, in that it gives opportunity for good classification and specialist teaching. But the lack of organic connection between the Sunshine Homes and the Schools for the Blind to which they are contributory has caused some overlapping of their respective functions, since the Sunshine Homes retain a considerable proportion of their children after the age of 5, when they may normally be expected to proceed to the School for the Blind. On this point we recommend that the Sunshine Homes should follow the practice of the Nursery Schools for the seeing, and refer to the Board of Education all proposals to retain in the Homes children who have passed their fifth birthday.

The objects of Nursery Schools are to supply the needs outlined above. They are set out more fully by Miss Grace Owen in the pamphlet already referred to, and quoted in the recent publication of the Board of Education on Infant and Nursery Schools. These objects, which are the same for blind as for seeing children, are the following :

I. To provide healthy external conditions for the children —light, sunshine, space and fresh air.

II. To organize a healthy, happy, regular life for the children as well as continuous medical supervision.

III. To assist each child to form for himself wholesome personal habits.

IV. To give opportunity for the exercise of imagination and the development of many interests, as well as skill of various kinds.

V. To give experience of community life on a small scale where children of similar as well as varying ages work and play with one another day by day.

The School Environment

The environment of the children is of outstanding importance. Every part of it must be carefully thought out and made to correspond as closely as possible to the child's own capacities and interests. It must be an idealized home environment, for, in the words of Dewey, " the home life in its setting of house furniture, utensils, etc., together with the occupations carried on in the home, offers material which is in a direct and real relationship to the child and which he naturally tends to reproduce in imaginative form."

(*a*) *The School-room.*

The furniture of the room must suit the requirements of the little child. There must be small, light tables and chairs which can easily be moved, low cupboards and lockers for the child's special treasures. These will enable him to help to arrange furniture, get out the material necessary for the various occupations, find his toys and put them away again when interest flags. He must be provided with abundant materials of all kinds to touch and handle ; he should be encouraged to explore the room and its contents and to ask about the articles he encounters in his journeys. By such natural conversations he learns the correct names of the articles he is handling and forms some idea of their size, shape and use ; his limited experience is enlarged and his vocabulary and power of language are assisted.

(*b*) *The Garden.*

The garden is an essential feature of the Nursery School and should adjoin the school-room. Open-air life is the most natural way of development for any child, and for the blind child the soft grass, sweet-smelling flowers, songs of birds, paths leading in various directions give wonderful opportunities for the enlargement of experience. At first he may be afraid to venture alone and needs guidance, but gradually he will observe different landmarks—a bend in the path here and a step there—and in time he will roam over all the little territory, feed his pets and dig his special plot, in so doing learning independence, observation and freedom of movement. There may be falls and other minor accidents in the development of such activity, but, as Dr. Howe pointed out nearly a hundred years ago, "A few cuts and bruises are better than total helplessness, and the child without sight soon learns his way about with but few accidents."

It may be that in our training of blind children we do not use the means afforded by a garden to the fullest extent. "The life of plants and animals attracts the deepest concentration of a little child, and he busies himself incessantly with active observation of whatever he can find living or growing about him." There is no need for set nature lessons, but direction in observation can be given to a blind child. The thickness of a tree-trunk can be estimated by children spanning it with joined hands, the roughness of the bark can be felt, and some idea of its height can be gained by comparison with that of a shrub. The children can feed birds, provide food for the tits in winter, and listen to their chirping: they can actually observe the structure of a bird's nest and the size of the eggs. By such means a store of concrete experience is gathered.

(*c*) *The Playground.*

A playground with hard surface on which are placed swings, chutes, jungle-gym and other apparatus to encourage activity and independence should form part of the nursery equipment. A large outside cupboard should hold the playground toys—wheelbarrows, trains, horses, push-cars. The child can then help himself to the toy he requires.

(*d*) *Washing and Dressing Accommodation.*

It may be thought that a little child without sight cannot do much in the way of washing his face and hands and dressing himself. Difficulties may be experienced at first, and success comes later than in the case of the seeing child. We cannot expect a blind child to learn readily things that require more dexterity and co-ordination than his fingers can command : careful observation, therefore, must dictate the right time to begin the process. It is highly desirable that at as early an age as possible he should be taught to wash his hands for meals after digging or playing in the garden.

Washing basins should be low, and all necessary articles should be within reach : the child's towel, toothbrush and flannel should each have a set place. It is important that he should get pleasure and satisfaction out of what he is doing.

It has been well stated of Nursery School training :

> " The nurse is concerned with external results—cleanliness and order—the teacher is supremely concerned with the child learning cleanliness and order. The object is by no means the external result but the forming by the child himself of certain habits and preferences so that they are taken up into his personality and affect the character."

The Daily Programme

Although no formal instruction is given in the Nursery School there are " fixed events " as well as times for free activities. In the residential school the Head Teacher receives the children from the nurse with " happy morning faces " after toilet and breakfast, ready to begin the important happenings of the day. Offers of help come from eager workers, some of whom arrange the room and get out the toys and necessary apparatus, while others feed the birds and pets. Such duties help the backward child to find a niche and to overcome undesirable mannerisms by providing him with interests outside of himself. Duties performed, the children gather round the teacher in a circle for morning prayers, which usually take the form of a simple prayer and hymn followed by a talk. This period is specially valuable in a residential school as forming a link with the child's home. Birthdays are noted and greetings given, and little personal events in the children's lives, such as a letter from home, a coming visitor, a treat in store, are commented on. The blind child is so much concerned with his own restricted world that it is specially important to widen his contacts and experiences by arousing his interest in the affairs of others. A restful, homely atmosphere, helped by quiet music and friendly conversation, forms a fitting prelude to the day.

A period of free activity follows, in which the child chooses his own occupation. Rhythmic or ring games, romps in the grass, the use of swings, chutes and other playground apparatus promote healthful exercise and freedom of movement. After free activity it is usual to encourage play occupations of a definitely individual character. The teacher of the blind child will think out the best materials to foster the spontaneous wish to learn possessed by most children. The child wants to find out about things by his own experiments rather than by being told, so he must be surrounded with things he can handle and use and with which he can construct and create, such as raw materials of all sorts, blocks, paper, sand, clay, scissors (blunt-edged and blunt-nosed), beads, simple constructive toys, dolls to dress and undress, utensils for washing day, cups and saucers for tea-parties, hand brooms and dusters, home implements of all kinds. In this connection Dewey says: "The materials for play must be as real, as direct and straightforward as opportunity permits." Creative self-expression in blind children can be fostered only if they are allowed to be active and express themselves freely.

Further, the main activities of the nursery school combine to train the senses. The ear of the blind child becomes very active at an early age, and his sense of rhythm and appreciation of music are soon shown. The use of percussion bands where each instrument is easily handled and has its different sound, simple rhythmic movements in time to music from the piano or gramophone, listening to definite sounds and following their direction, are all valuable in supplementing the experience of the ordinary sounds which the child hears and learns to differentiate.

The play of the young child is mainly individualistic, and consists largely of impersonation. By putting himself inside the thing he wants to know about, and by being that thing, he learns how it feels. In a very real sense he is the thing whose sounds and actions he imitates—the bus, motor-car, dog, mother, father or teacher. But in the environment of the nursery school he has companions of his own age and gradually learns that he is one of a social group. The singing games in which he takes part, his performance with one of the instruments of the band, the social contacts at meals are all occasions of his sharing in a common activity. He is still an individualist, but his attention is directed towards others, and such training in social behaviour fits him for the larger life of school which comes later. This social training is of the utmost value to the blind child, for he is specially liable to be shut up within himself. A life of activity which is shared with others creates a more fruitful reaction to his environment.

There is no need to discuss the meal times and midday rest in the nursery school, for their value for physical and social needs is well known. The hour of sleep which follows dinner and free play is essential for children of pre-school age. The latter part of the afternoon is usually devoted to free play or constructive occupations for the older children.

THE HEALTH OF THE CHILD

One of the main ideas in starting nursery schools was to secure and maintain the health of the children. Medical inspections with detailed records are therefore an essential part of the scheme.

On admission, information concerning the parentage, family and home conditions of the child is entered. Following this comes the history of the child himself, the ages at which he commenced to walk and talk, with references to general physique and previous illness.

At the first inspection health and eye conditions are recorded by the visiting physician and ophthalmologist respectively. Alterations noticed in subsequent examinations are recorded in detail. Physical defects, such as muscular weakness, weak ankles, flat foot and postural faults, are treated by an orthopædic surgeon, and remedial exercises and massage are prescribed. Weight and height are usually recorded once a month. Physical well-being and mental growth are recorded by the matron and teacher.

When the child is transferred at the end of his nursery days a duplicate Case or Progress Book is forwarded to the Infant School, thus providing for an unbroken record of health and progress during school life.

CHAPTER 3

THE INFANT SCHOOL

It is very important that there should be no abrupt break between the Nursery School and the Infant School, for the blind child finds it even more difficult than the seeing child to adjust himself to a sudden change of environment. Such difficulties are observed when individual methods are used in the Nursery School and class methods in the Infant School. If the child has been accustomed to wait for individual direction and help he cannot at once adjust himself to group methods. Nursery Schools, therefore, ought to give some preparation for the class instruction of the Infant School, while the Infant School ought to be prepared to continue to some extent the individual methods of the Nursery School. A co-ordination of methods is desirable.

Perhaps the best way to ensure continuity would be to have a Nursery wing in the Infant School, so that the teachers of both departments may work in conjunction and consultation with one another. If this is impossible the teachers should meet occasionally and visit one another's schools in order to bridge the gap that at present so often lies between their methods, each trying to gain some understanding of the special problems of the other. The advantages of teachers in Nursery Schools having had experience in Infant Schools, and vice versa, would be very great.

It is also desirable that the Infant School or Kindergarten should be either a separate school or a separate department of the Blind primary school, where the discipline and methods can more nearly approximate to those of the Nursery School. It is undesirable that children of all ages from 5 to 14 should learn, live and play together, as is sometimes the case under present circumstances.

The blind child has less incentive than the seeing child to become independent. An attitude of independence in the seeing child is largely encouraged by imitation of others whom he sees, by seeing things which he can get for himself and manipulate. Since this important field of incentive is lacking in the blind child, the teacher must supply other incentives. She must teach him that it is a good thing not to have to wait for help, and she should ensure that his own efforts bring him some small satisfaction or advantage. She should give him things to do of which he can experience the effect. Like the seeing child, he wishes to take part in the activities of home and school, but he needs more careful explanation of certain actions and the reasons for these actions. He must learn not only to water the plants, but why it is necessary to do so ; not only to put toys away tidily, but the reason for tidiness. In every possible way his environment should be planned so that independence is encouraged. Pegs for his clothes should be accessible, and shelves and cupboards where his belongings are kept should be easily within his reach. It is supremely important that the teacher of the young blind child should never do for him anything he can do for himself, even if he can only do it slowly and badly.

The blind child has the same need for physical activity as any other child, but it must never be forgotten that he is badly handicapped in obtaining the normal, healthy satisfaction of this need.

Habits, such as rocking and swaying, or twisting round and round, are his own way of obtaining satisfaction. The seeing child runs, partly because he sees others doing it, partly because he sees some object which he desires to reach ; and he can avoid obstacles without difficulty. The teacher of the young blind child must ensure that he, too, discovers the pleasure of running, and that this is made as safe and easy for him as possible by the provision of a running track, and toy wheelbarrows or other large toys behind which he can run. Playing horses or buses with a leader should also be encouraged.

All normal physical activities must be considered and provided for in such ways, and adapted to the needs of the blind child. He is not to be compelled to take part in physical activities, but he is to be definitely encouraged to enjoy them, and get some real satisfaction from them.

Like the seeing child, the blind child finds the material for his play in imitation, but, by his blindness, he is cut off from the field of visible things. Probably the first games in which he is interested and desires to participate are those which involve imitations of sounds, such as the hooting of motor-cars, or the barking of dogs. Other games will be based on his own experiences; he will put a doll to bed because he has himself been put to bed. Games such as Fathers and Mothers, Teachers and School, will arouse in him a desire for companionship, and it is particularly important to encourage this beginning of a social sense which is so peculiarly liable to remain undeveloped in blind children. He is too often self-engrossed and self-sufficient, living in his own world, and unaware of what others are doing.

In every way the environment must encourage physical and mental activity. There must be space in which to run about freely and in safety, and there must be plenty to touch and hear.

The development of personality and character through doing requires much ingenuity and insight on the part of the teacher of the young blind child. All virtues must be practised to become inculcated, and, in particular, special opportunities must be afforded the blind child of sharing with, and helping, others. Great attention must be paid to this aspect of character development, since, owing to his greater dependence, the blind child expects to receive help rather than to give it.

There should be much freedom in action and in choice of occupations. The teacher needs to follow the guidance of the blind child himself, remembering that his world is different from that of the seeing. He has not yet become stereotyped, nor moulded by the pressure exerted upon him to live and behave as the seeing in a seeing world. The teacher by careful observation can learn his true interests which constitute the guide to the development of his personality.

Formal lessons will begin only when the child has indicated that he is ready for them, which will normally be at a later age than in the case of the seeing child. In many ways the blind child is more immature, and needs longer time to learn the lessons of early childhood.

There are five types of children to be found in Infant Schools, each with their special characteristics :

1. *Those from Nursery Schools.* The child from a good nursery school will show independence, command of language, activity, alertness, and some social sense. The need here is to carry on his previous good training without a break.

2. *Those coming from home.* Such children have frequently a greater knowledge of home activities, but are less developed socially. Social development is retarded in the case of the " only " child, and in the case of the blind child whose special needs have been neglected.

3. *Retarded Children.* Reasons for retardation may be neglect on the part of careless parents or over-indulgence on the part of ignorant parents. Such children may appear mentally defective as a result of foolish treatment and an entire lack of suitable training. Retardation may also be due to illness. But defective intelligence may be innate, and pupils who suffer in this way constitute one of the major problems of blind education. It takes some time to decide whether the apparent deficiency is due to lack of mental ability or to lack of suitable stimuli, and hasty

diagnosis must be avoided. It is essential to try to discover the true reason for the retardation.

4. *Late Admissions.* These constitute a great problem as they are unsuitable for the infant class, and yet their attainments are generally those of an infant. If put in an infant class they do no good either to themselves or to their fellow-pupils. They need a class to themselves, and it seems desirable that schools should be sufficiently large to make possible the organization of such a class.

5. *Precocious Children.* Such children are comparatively few among the blind although cases of one-sided development are often noticed, due to the blind child being more circumscribed in his interests and activities than the seeing child. There is the child who seems to delight only in sound and who can name notes on the piano, and there is the child with a highly developed verbal memory.

The three types (*a*) born blind, (*b*) blind but with visual memory, and (*c*) partially blind, all present different problems. The presence of all three in the same class greatly adds to the difficulties of group work.

Buildings and Equipment

Buildings should be planned entirely to suit the needs of infants. All the children's rooms should face towards the south and have large windows capable of being widely opened. French windows are very desirable. For very young children corridors should be reasonably straight, with no jutting-out corners, and always kept free from casual obstacles.

It is essential that school-rooms should be large enough to allow of plenty of free movement, for blind children should have every encouragement to take part in physical activity. Groups of children should be in entirely separate rooms rather than in one large room divided by a screen or thin partition, as blind children are particularly aware of distractions in the way of sounds.

The floor is the natural place for many of the activities of young children: for example, it is easier for them to build on the floor than on desks. The floor should be covered with cork lino or other suitable material which combines warmth with cleanliness. Mats are a hindrance rather than a help in the case of blind children. There should be light tables of varying height and chairs to match them, also a large table for co-operative work. There should be toys and apparatus, such as sand trays, also cupboards and shelves well within the children's reach, where such articles may be kept. There should be a small library of Braille books and a bookshelf on which to keep them, and there must be a piano. Display cabinets for special pieces of work are also useful. It is desirable, too, that each child should have some small pigeon-hole or shelf in which he can keep certain personal apparatus or pieces of work which are peculiarly his own.

It is important to have living things in the child's environment: plants should therefore be provided, also tables and shelves on which they may be kept. There should be room for pets, such as doves, canaries and mice.

Apart from classrooms there should be a playroom providing space for physical activities when the child has to play indoors. It would be ideal to have two playrooms, one empty of furniture for games of physical activity, and the other furnished with tables and seats for quieter games. The second should have a supply of lockers in which each child may keep his own toys and other belongings. There should be a supply of indoor toys for general use, such as doll's houses, Noah's Arks, rocking horses and building bricks. For the children's dining-room it is desirable to have small tables and chairs varying in height as in the classrooms.

Cloakrooms, bootrooms and all children's offices should be of ample size and fitted with basins, pegs and partitions all well within the children's reach and so marked or arranged that each child may readily find his own. Every encouragement should be given to the children to become independent.

There should be a spacious playground with hard surface in a sunny sheltered position and yet with some shade for very hot sunny weather. There should be in one part of it various apparatus, such as a jungle-gym and a see-saw, also a sand-pit and perhaps a paddling pool. Other outdoor toys which will encourage activity, such as wheelbarrows and carts, should be available.

A good grass field is very desirable for play in the summer, and it should be available for lessons when the weather is suitable. Either there should be special furniture for it or the classroom furniture should be easily movable. It must be remembered that blind children are unable to work without proper table accommodation: since they need their hands to "see with" they cannot at the same time use them for holding their apparatus. There should be a garden containing a large variety of scented flowers and herbs, and the edges of the beds should be tiled or well defined in some way that can be felt by little feet.

Organization

We agree with those witnesses who have strongly urged that the ideal number of children in a class is about 10. In exceptional circumstances it might be increased to 12. Such a number is large enough for games and group work, but small enough for the teacher to give to each child the amount of individual help he requires. For while we aim at making the blind child independent, we must recognize that he requires more individual attention than his seeing brother.

In the infant school it is probably best to classify according to chronological age. The retarded or untrained child of 8 or 9, whose attainments are no more than those of a child of 6, is generally unsuitable for the infant class. The bright child of 6 can be provided for by individual methods of teaching. Numbers are generally so low, however, that it is unavoidable to have children of 5, 6 and 7 in the same class. But again individual methods will produce satisfactory results.

Clearly much of the teaching and work must be individual to suit the needs, interest and stage of development of each child. But it must be remembered that the young blind child benefits greatly from being partly taught as one of a group. Too often he is treated and spoken to merely as an isolated individual, and, on coming to school, he has no idea of himself as a social unit. He needs encouraging to take part in group activities, such as ring games and singing, and to take an interest in what others are doing.

The time-table must be almost entirely free and constitute only a minimum framework for the guidance of the teacher. Many factors such as the children's interest, the weather and the season of the year combine to determine the length of lessons, the form they take, and the length and frequency of breaks. All children are not ready to change occupations at the same moment, and in the free atmosphere of the infant-room the needs and interests of each child can, within certain obvious limits, be considered.

There should be one fully trained teacher to each ten children. Her training should have been specially for infants, or she should at least have had a course of special Kindergarten or Infant training in addition to her ordinary training. It is most undesirable to have young, untrained helpers or nurses in charge of young blind children, for it is often by their foolish, though well-meant, treatment that the careful work of the trained teacher in cultivating independence is undone or frustrated. More perhaps than other children blind children need consistency of treatment, and they suffer badly when differing methods are applied and different standards of conduct expected. There must be unity of aim and method among all who deal with blind children, and helpers must strictly follow the guidance of expert teachers.

Development of the Child

All development comes through activity and experience. It is difficult in the case of blind children to provide a sufficient variety of activities and experiences. It is not easy, for example, to take young blind children on expeditions, and it is even less easy to ensure that they form an adequate idea of their new surroundings. In school the widest possible range of activities and experiences must be provided. Simple projects help to furnish occasions of purposive activity, for example, washing of dolls' clothes and crockery, the use of polish, dust pan and brush in cleaning the dolls' house, cooking, making toffee and so on.

Mental development may be considered under the three headings of (1) Sensory training, (2) Physical activities, (3) Intellectual activities.

1. *Sensory Training.*

(*a*) *Hearing.* It is necessary that the blind child should learn to connect sound and object. It is not sufficient, for example, that he should know the word " dog " merely in connection with the sound of a bark ; he must also learn by touch what a dog is like. In addition to hearing the songs of birds, he can form an idea of what a bird is like by handling stuffed birds.

He must gain experience of distances and directions by means of sound. He can play games where he follows a sound or moves to the position of a sound he has heard. Through games, too, he can learn to recognize and imitate sounds, learning words such as " loud," " quiet," " shrill " in this connection. Percussion bands will help in ear training, and further musical training can be given by means of simple singing lessons.

(*b*) *Touch.* The sense of touch can be developed through handling articles and materials and so learning the meaning of the words " full," " long," " wide," " soft " and so on. There should be free play with as varied toys, objects and materials as possible, including foot and inch measures, quart and pint measures, scales and weights, coins, the child always learning the correct word in connection with the object.

(*c*) *Smell.* Here again experience must be given of common household objects such as vinegar, and the flowers and herbs in the garden. Words such as "paint" and "smoke" will gain a meaning for the child.

(*d*) *Taste.* In a similar way experience of tastes will be given, and the meanings of such words as "sour," "sweet," "coffee," "tea," will be learned.

2. *Physical Activities.*

The normal physical activities of the child at this stage are concerned almost entirely with play. As already noted, the child finds his material for play largely through imitation, and the blind child, because of his blindness, is cut off from most of what the seeing child normally imitates. So the blind child's play is apt to be aimless, suffering from lack of suitable stimulation and motives. He has to be taught how to play. Adults must not discourage him by telling him that he cannot do certain things or that they are dangerous for him. By suggestion and encouragement to participate they must lead him to enjoy all the games that are possible for him, always remembering to connect word and action.

Simple, stepping rhythms played on the piano provide an incentive to free and balanced movement, and the provision of wheelbarrows, trucks, jungle-gym and so on encourages activity.

Frequently the blind child is muscularly immature. Running and jumping will correct this in the larger muscles, while the provision of materials to handle, such as building blocks, india-rubber articles that can be squeezed and climbing apparatus, will strengthen the muscles of the hand.

3. *Intellectual Activities.*

With blind children especially it must never be forgotten that the path to effective thinking lies through doing. Where there are so many difficulties in the way of free activity it is specially important to see that ideas issue in action.

Speech training is very important throughout the whole of this stage of school life. The young blind child should have a well-developed spoken language based on ideas gained from his own sensory and motor experience. Further methods of speech training are stories, poems and nursery rhymes read to the children, dramatization of stories and conversation lessons on topics of interest. Time should be reserved each day for the children to relate their own small items of news.

Defects in speech should be carefully noted and corrected as far as possible by simple breathing exercises and repetition of suitable rhymes and jingles. The phonic system of learning to read is a valuable help in correcting errors of speech.

Number teaching will be introduced through forms of play which supply incentives for counting and measuring. Play with materials, such as beans, dominoes, bricks of varied sizes, sticks of differing lengths will provide occasions for the teaching of counting and measuring. Projects such as shop-keeping and tea-parties are also useful. The Taylor frame may be introduced very gradually, the child learning the figures and the setting down of easy numbers. It is essential that he should have a background of real experience of such numbers. Often a project provides a need to work small sums on the Taylor frame.

Handicrafts.

Handicrafts should take the form of the expression of the child's own ideas. If handwork is the outcome of a project such as "the home," "the garden," "Christmas," the child's work will be a purposive fulfilment of his felt needs. Children's interests are practical. The handwork of blind children must be based on work they are able to understand, to carry out, and to enjoy. The desire to make something which can be used in the doll's house, or given to Mother on visiting day, leads to constructive work, such as simple knitting, raffia winding, plaiting, weaving, and bead work. This type of work involves the training of the finger muscles, and although the results may be crude, the pride of achievement is evident when an article is completed.

Toy-making, with all kinds of material and odds and ends, delights most children and calls forth ingenuity. Some of the work is co-operative, such as making a doll's house and furnishing it, or the construction of a little shop. The need of measuring and designing, with the use of tools, such as marked rulers, blunt scissors, and small hammer and nails, develops skill in using the fingers. The joy of manipulating a hammer and nails to make a kite which can afterwards be used in the playground cannot be exaggerated.

Clay modelling is an excellent means of expression in concrete form. Fruit to stock a greengrocer's shop, benches for the garden, cups and saucers for tea, may help in the class project. Interest is maintained by the variety of the work, and the actual handling of the object to be modelled. The manipulation of clay or plasticine is excellent for the muscles of the fingers, and the imagination is developed by the illustration of little stories and poems.

In free-expression work, brick-building, playing in the sand-heap, digging in the garden plot with the use of simple tools, such as spades, buckets, trowels, and wheelbarrows, provide interesting outlets for the child's initiative powers.

In the infants' class, as previously noted, many of the activities are informal, and follow so far as possible the home life from which the resident school child is cut off. Laying a table, washing day, tidying cupboards, and using fork and spoon, teach him helpful social duties, and method in carrying them out.

The variety of material and use of simple constructional toys and tools are of the utmost importance at this stage. The muscles of a blind child's fingers are often flabby through lack of use ; he finds difficulty in using the material given to him, and has no grip with his fingers. Many of the constructional toys are made of parts which fit into other parts, for which pressure is needed. Even the winding of mechanical toys and the linking together of the rails for a train need patience, and a fair amount of muscular skill.

Braille.

Just as reading and writing have a place in the curriculum of an ordinary Infant room so Braille must be found in the Infants' programme of a School for the Blind. There should, however, be no hurry to begin and no formality about the method. It is frequently asked at what age blind pupils should start Braille. There is no answer in chronological age, but a safe guide is to say that the child should be allowed to begin as soon as and no sooner than he wants to ; it is the business of the teacher to stimulate that want. The work of the Infant room is the adaptation of the child to life, and in his practice of social activities he will find the solid advantage that is to be gained from reading. He will note that his companions who can read can use that skill to obtain serviceable knowledge which still remains hid from him. His interest is aroused. He goes to his teacher and demands to be taught. He may have been a few months in school. He may have been a couple of years. Braille to him is the revealer of secrets, the key with which to open doors, and this attitude must be shared by the teacher. The end of education is living —knowledge and skill are means to that end. Braille is a means to an end. Any attempt to treat it as an end in itself is to be deprecated. Braille is an instrument whose successful manipulation will enormously aid the child in his growth to intelligent manhood. Its use must be learned like that of other instruments by doing, by practice.

The initial stage is not to know that the first ten letters form the basis of the system but to distinguish two dots from one. The child's approach to Braille should not be logical but psychological. It should not be determined by the rules of thought but by the pragmatic gropings of an immature mind.

The home teacher, in laying bare the mysteries of Braille to an adult learner, may, with advantage, adopt the logical method. She may talk of system and its architectural beauties. The situations are entirely different, and we make no apology for stating dogmatically that the approach above indicated is the only suitable one for the Infant room.

Within the limits of that approach methods may vary, and we think the teacher should by trial and experiment seek the method which will prove most efficacious in her particular case. A warning may at this stage be given. In most lines of human thought false analogies are the fruitful source of wrong conclusions, and the teaching of blind children shares the common fate in this respect. Shape, when presented squarely to the eye, is constant, but size is variable. A penny may blot out the entire disc of the sun. It is all a question of distance. The interpretation of this factor of distance is a mental exercise which begins with infancy and is incessantly at work. The visual image is put in its proper relationship by overriding judgment. The reading of letters is no exception to this rule. The symbols are the same whether in large on the blackboard or in small on the printed page. The fact that in one case the letters are six inches high, and in the other only the fraction of an inch, makes no difference to the experienced eye. No disconcerting ambiguity is created by the simultaneous use of large and small.

With the sense of touch things are different. What is felt must be accepted as literal truth. Mental adjustment is at a minimum. The sensations which arise from feeling large dots and small are perceptions of different things and no corrective mental operation can make them the same. Thus the introduction of children to Braille by way of giant dot is a mistake. It is the result of a false analogy drawn from sight. From the beginning Braille dots of standard size should be used. The child's finger is quite sensitive enough to discriminate when once the mental process of interpretation is aroused. The fact that Braille reading is largely a mental process and does not require excessive sensitivity is now too well recognized to require elaboration here. Steady practice is needed for the development of the requisite adjustment between brain and finger, and care must be taken to see that the sensory impression is uniform. Any scrubbing of the dots or rubbing of the finger up and down must be avoided. The two forefingers should be drawn lightly and steadily over the dots from left to right, and every other type of movement rigidly excluded. This may seem a slower method in the early stages. The temptation to scrub is both insidious and strong, but it must be resisted if good reading is to be secured.

A few words may be added with regard to a more general aspect of method. Differences of opinion and of practice occur as to the stage at which contracted Braille should be taught. The commonly accepted practice is to begin with uncontracted Braille, and to delay the pupils' initiation into contractions until complete mastery of Grade I has been obtained. On the other hand, an experiment has been carried on for several years at the School for the Blind, Swiss Cottage, which is said to have been attended with such success as to warrant its continuance. From the outset, the child is taught to read contracted Braille. We were much interested in what we were told of this experiment, and although we do not suggest that the evidence as yet is conclusively in favour of the method described, we think it well to commend it for consideration, and quote from the statement submitted to us :

" To avoid teaching something which must later be unlearnt seems a sound principle to follow as far as possible. The use of uncontracted Braille at the start offends against this. The children learn to write many words in one way and some words in two ways, all of which have to be abandoned later in favour of the Grade II symbol:

e.g. MOTHER.
(i) m-o-t-h-e-r.
(ii) m-o-the-r.
(iii) dot 5 m.

Of these three forms, the final seems the easiest and the quickest to read and to write. Why not use it at the start?

"We are adding to a blind child's difficulties if we neglect to take advantage of certain features of the Braille system which, rightly used, would give him a slight advantage over children with sight. The extended Braille alphabet has symbols which stand for frequently recurring sounds, e.g. th, sh, ch, st and er. In tackling an unknown word such as *shut* in uncontracted Braille the blind child is at a disadvantage. He has to feel two separate letters, pause to remember the sound represented by the combination *sh* and then *sound* his word successfully. A seeing child soon learns to recognize the combination as he sees the letters side by side. The blind child must ultimately learn the symbol dots 1, 4, 6. Why not teach it at the beginning when a separate symbol for a distinctive sound is really useful for word building, and cut out unnecessary and laborious work?

"In our experience phonetic symbols, such as those above mentioned, are very useful in the early stages of word building. It is, too, an advantage for the children to become familiar at an early stage with the symbols which they will use all their lives. They have nothing to unlearn, and in later life they use their contractions more readily than children who begin with uncontracted Braille. Another point is that contractions are a distinct gain in writing. Small children can cover more ground before their hands become tired. Compare the contracted and uncontracted form of the sentence, "My mother will not go out to-day," i.e. eleven symbols as compared with twenty-five. It is sometimes objected that this method would have a bad effect on the children's spelling. May it not be that there is some confused thinking underlying such an objection? A blind child's medium for reading and writing is Braille. If he can use his Braille letters and contractions correctly, his spelling is good even if he does not know that the equivalent symbol of dot 5 r is a letter sequence—r-i-g-h-t—in ordinary printed books. A child with sight is not considered uneducated because he is unfamiliar with Braille symbols which he does not use. Why should a blind child of the same age be expected to know the symbols necessary in printed books in addition to his own? Blind typists and blind people who use ordinary handwriting are the only individuals who really need to know both forms; any boy or girl of 14 of ordinary ability could learn them in an hour or two."

Experiments on somewhat similar lines were conducted at Perkins Institution, Mass., in 1929-31, under the direction of Dr. Frieda Merry, and were described by her in *The Teachers' Forum* for November 1932. In her view, no dogmatic conclusions could be reached in view of the small number of children involved in the experiments, but, so far as she could judge, the indications were that "the teaching of contractions to beginning Braille readers promotes greater speed of reading, and in some cases greater accuracy . . . there seems no reason why beginners cannot learn to read contracted Braille." No adverse effect upon spelling was observed.

CHAPTER 4

THE FIVE YEARS FROM NINE TO FOURTEEN

During this vitally important period there is continual physical, mental and moral growth. The child is becoming more self-reliant and self-controlled. His interests are widening, and his instincts are shedding their primitive character. He is now able to make judgments about himself and about those around him. He distinguishes with increasing correctness between right and wrong. He has a more satisfactorily graduated standard of values. He knows what he likes, and why he likes it. All this is as true of the blind as of the seeing child. The curriculum must take cognizance of these things. Initial difficulties will have been already overcome. The mechanism of speech, of reading and writing will in most cases have been largely mastered. Sense-impressions will have been co-ordinated, and further formal exercises in sense-training may, for the most part, be dispensed with. In a multitude of ways, the blind child will learn from everyday experience to depend on his sense of hearing, and the incidents of routine life will provide effectual and ample means for training in the sensation of touch. This, of course, does not apply to the more specialized sensations of sound which must be developed through the study of music, nor to the use of the hands in craft work. Such activities will find their place in the curriculum, and will be fully dealt with at a later stage.

In selecting and formulating the material of the curriculum for this age group, the predominant consideration must be its usefulness to the child as a blind child, and his preparation for an after life of deprivation as far as the sense of sight is concerned. This does not mean that utility will have to be the one thing thought of. Attention must be paid to his æsthetic development, and he must have his share, and perhaps more than his share, of mental pleasure, to make up partially for the joy in physical activity of which he is deprived. In the main the curriculum should be so devised as to be of service to the blind child in making him independent in his ways and thoughts, and in supplying him with the information about the world he lives in, which, through his handicap, he is not able to obtain for himself.

The guiding principles laid down in the introductory chapters of our Report must be borne in mind, particularly the conclusion that in schools for the blind it is of prime importance that the curriculum should be based on activities, and that a passive attitude on the part of the learners should be emphatically discouraged. The principles which underlie curriculum-making are to be found in treatises on the education of the normal child, and the attention of our readers is directed to such valuable publications of the Board of Education as *Suggestions for the Consideration of Teachers* and the Reports of the Consultative Committee on the Nursery School, the Primary School and the Education of the Adolescent. These and other pedagogical works must be studied by all teachers of blind children, for it is the adaptation of these principles to their special needs which constitutes our particular problem.

It should be clearly understood that in this Report care has been taken to exclude all discussion of educational theory and method where the conclusions would be common as regards the treatment of the seeing and the blind child. We have not attempted to write a treatise on Education with special reference to the blind. What we have tried to do is to indicate the implications of that reference, by laying stress on those details where lack of sight makes advisable a departure from orthodox practice, and points to independence in approach and procedure.

A child with sight is largely self-educated through that sense, and is continually absorbing, almost without knowing it, stores of knowledge which the blind child cannot obtain without assistance. For the seeing child the world has form and colour. He is surrounded by that miraculous panorama which is perpetually shifting in kaleidoscopic change through infinite gradations of light and shade. His perceptions range from the beauty of kindliness in his mother's face to the majesty of a star-filled sky. He lives in a universe of light, and his being cannot but respond to that enlarging influence. On a lower plane, he sees advertisements, newspaper placards, goods displayed in shop windows and a thousand and one other things. His stock of knowledge is always being added to, and he learns without instruction. If he goes on a country walk, unless he is day-dreaming, he must acquire much knowledge of fields and hedges and all they contain, plants, trees and animals, and do so without effort. He will learn from town and country something of domestic architecture and, from old buildings and new, differences in their styles. Above all, he will note manners and customs and become acquainted with the conventions that have such a potent influence on ordinary conduct. He will have, moreover, in his daily life, endless incentives to explore with his fingers little everyday things that come his way.

Almost all this "Everyday Knowledge" has to be directly brought to the notice of the blind child, and "Everyday Knowledge" must, therefore, bulk largely in the curriculum of the blind. It must not be kept in a water-tight compartment, nor even receive a definite place in the time-table. Almost every lesson should provide opportunities to a skilled teacher of imparting such knowledge, and the child's hours of recreation should be so used, that without its being burdensome, he may be brought into the actualities of everyday life. Where it is possible he should be encouraged to enter shops by himself and undertake small commissions. Small companies of children should be taken to markets and fairs where there is much life and bustle, to historic buildings and to new, and later to factories and workshops and places of business. The younger children may not find much that will interest them in the newspapers, but they will, particularly the boys, have some interest in ordinary sport, and will doubtless have a favourite among football teams. It is most desirable that this should be so. As the pupils grow older, interest in other aspects of the world's doings will develop, and it is well that a summary of the news should be read daily. The Committee were much impressed by the evidence of one of their witnesses who had himself been brought up in a residential school for the blind. He stressed the necessity of giving special attention to this "Everyday Knowledge," and his opinion was endorsed by other witnesses who had been similarly circumstanced. Some indeed pointed out that many quite elementary facts were unknown to them until they had left school and taken their places in adult life.

Even the veteran teacher is sometimes startled by the unsuspected gaps in his blind pupils' knowledge. He may encounter a belief that the camel possesses only two legs, or that a rabbit is the size of a cow. Even animals of a still more domestic sort may be quite unknown, as is shown by the following true tale. A certain school had among its pets a donkey which one rainy afternoon broke from its allotted section and wandered along forbidden paths. A little girl happened to be crossing the grounds at the same time and returned to her classroom in the deepest woe. When questioned she explained her encounter with a grisly unknown: "It was wet," she sobbed, "and hairy, and I think it must have been a boy."

Such instances make clear to the teacher his obligation to strive constantly and resourcefully to make up to his pupils the deficiencies that blindness has imposed. It is much more important that such lacunæ be filled in than that the pupil should know the exact length of the Ganges, or the names of Henry VIII's wives.

We must then take into consideration on the one hand the special needs of the blind child, and on the other, his special mentality. What are the modifications of mental life occasioned by his deprivation we have discussed elsewhere. It is sufficient here to record that most teachers are agreed that there is a certain amount of retardation. The mind, through lack of experience, has not developed to the same extent as that of the seeing child, and in some cases it has developed unevenly. Many blind children exhibit signs of abnormality, such as a freakish power in calculation. Many are unhealthily introspective and indulge in a life of phantasy. Let it be noted, then, that the average intelligence of blind children is certainly not higher than that of seeing children. Many, indeed, fall below that standard, and only a few in any school are likely to benefit from secondary education in the conventional sense of the term. For gifted children—and there are usually some in every school—special opportunities must be provided. At the moment we are only considering the average child.

The degree to which such departures from the normal, whether in retardation or in peculiarity, affect the selection of material must not be exaggerated, but it does at least justify a plea for elasticity. While we speak as if the curriculum were designed for every pupil in each stage of school life, it must be remembered that idiosyncrasies must be catered for, and that each child will need this or that modification of his programme, if the most effective results are to be secured. With this reservation in mind, we must envisage a programme which will cover substantial advance during five of the most formative years of the child's life. He must make considerable progress in the power to use his mother tongue, both spoken and written. Before the age of 14 is reached, he must gain some elementary notions of how he and his generation have come to be where they are in time and place. He will have begun to make acquaintance with the phenomena of the organic and inorganic world, and to reach out, however dimly, to some rudimentary apprehension of the working of Nature's immutable laws. Music and handicrafts will play important parts in the curriculum at this stage, while the wise care of the child on the physical side will pervade the whole of his school work. Religious knowledge and moral training must receive their due attention ; the educational process would be incomplete without them. It is not too much to say that such instruction must interpenetrate the whole of school teaching, and through its means there should be created a permeating atmosphere in which clear thinking and right doing will be the normal phase of behaviour.

English

The teaching of English cannot be limited to any set of lessons. Every piece of instruction, every conversation between teacher and pupils must of necessity be an exercise in the use of the mother tongue. Although it has been asserted that speech defects are commoner among blind children than among the seeing, we are glad to be able to state that it is generally agreed that blind children speak well, not only with clear articulation, but with a pleasant intonation and good pronunciation. As a rule, when they do not revert to the dialect of their home county, their speech is unusually correct. In many cases, as they grow older they display literary judgment and evince a lively appreciation of poetry, particularly of lyrical poetry. Regret has been expressed that there is not a more abundant supply of books which interest young children, but there is at least this compensation, that the books available are of a good literary standard and blind children are spared the reading of much that is second-rate. In most schools for the blind the foundations of literary taste are well laid.

The practice of memorizing poems and prose extracts is very common, and is entirely commendable so long as it is borne in mind that pupils' abilities vary, and that the same expedition in learning and power of retention cannot be expected from every child. It is a sensible custom to allow children to select poems which have specially appealed to them, and to memorize these in preference to poems which have been selected by the teacher. Frequently blind children write out in Braille collections of their favourite poems, and these little books form the beginnings of a private library and very often become lasting treasures. Dramatic work, which was commenced in the earlier years, ought to be developed. It is unnecessary that it should be anything but simple, and its purpose should be to give pleasure and instruction to those taking part and to the other members of the class. Occasionally plays of a more elaborate nature, to the performance of which outsiders may be invited, will be prepared. These naturally require more care and attention to detail and are probably of less educational value than simpler plays performed in the classroom. Several games which children play out of school hours, such as "Word-Making and Word-Taking," have a distinct value in extending the vocabulary. They also promote alertness and may occasionally be played in school hours. Indeed, the teacher should aim at encouraging spontaneity, and should welcome written exercises on topics which the pupil has chosen for himself, and in which he has desired to make his own observations. These may be inadequate, but to him they will have the advantage of being original. He should be led on to produce little poems, and, though the afflatus of genius may be lacking, the consequent increase in the knowledge and use of words will be doubly valuable because the effort was self-imposed. Much attention should be given to the art of composition, and this need not be unpopular or burdensome if children are set to write on subjects within their comprehension. There must, of necessity, be some lessons on the grammar of the language, but care should be taken that these do not absorb too much time or become irksome.

The main purpose of teaching Braille writing to blind children is the supplying of the ability to express ideas in written form. Incidentally, the teacher will also aim at the acquisition of ease and the practice of correct spelling. The Braille system, with its many contractions and its occasional perplexities, is more easily read than written. It is probable that even the most expert Braillists occasionally deviate from strict orthodoxy in the use of contractions, and it is, therefore, unreasonable to expect young children to attain perfection.

At the age of 9 years if a child has been admitted to school at a reasonably early age, between 5 and 6, he will be able to read with some amount of fluency, with expression, with understanding and with pleasure. Reading aloud, when well done, is an acceptable art. It is one in which the skilled Braillist need not fear comparison with even good readers of print. The annual competitions at the National Library for the Blind have shown how far mastery of Braille can go in fluency, flexibility and correctness and have set a standard towards which every school should strive. At the same time the regular practice of reading round a class, each child taking his turn, is to be deprecated. It is wasteful of the time of the good readers, and though it may be indulged in occasionally for special reasons, an undue amount of time should not be spent upon it. It is sometimes defended on the ground that it provides opportunities for correcting speech defects. These, however, can be attended to more effectually by means of recitations and dramatization, and almost every lesson during the day will supply occasions for the correction of faulty speech. Children, while being allowed to read to themselves, should, from time to time, be called up by the teacher to read to him, and should be asked to read passages of considerable length. Many blind children are fond of "private" reading, and this should be encouraged. In some schools story books are read aloud in recreation-rooms and dormitories by the children themselves. This is commendable, so long as it does not provide an excuse for remaining indoors or encouraging mere passive listening. It is obvious that it is much better for pupils themselves to read than to listen to the reading either of a blind companion or a seeing friend. The reading matter furnished to blind pupils should not be confined to purely literary models. It is occasionally of advantage to test their ability in the understanding of utilitarian documents such as park notices and other announcements signed By Order. It is, however, good to reflect that the translation of newspaper headlines into English is for blind youngsters an unnecessary skill.

It would appear that there is an insufficiency of really interesting books suitable for young children in Braille, and we think it would be well if the supply could be increased. For older readers the supply seems very reasonable and new books are constantly being added, but children, and particularly children who are just beginning to enjoy reading, have been somewhat neglected.

History

The teaching of history to blind children is so much on a level with its handling in ordinary schools that little special comment is here required. With Braille as his instrument and medium the blind child will read his authorities, will write notes from oral teaching, and generally will do most things in line with a seeing student. Vividness and actuality must be given to the lessons. Visits to places of historical interest must contribute colour and reality. Museums, a name which to some people strikes as chill a note as mausoleum, must be rendered excitingly alive and cause the pupil to feel that for a brief space he is himself a knight-at-arms and blood brother to Wilfred of Ivanhoe. Expeditions must lead him to realize that history and geography are but complementary aspects of one human story, that, indeed, all knowledge is one, and that the purpose of its teaching is to help him to apprehend, in however rudimentary a fashion, how the events of the past flow creatively into the present, and how in turn to-morrow may be influenced and fashioned by the wise guidance of to-day. The teacher of blind children must sketch in broad outline only. Many volumes must be left unopened, but even so, history will remain a study where blind pupils are at small disadvantage. They will meet a keen teacher more than half-way.

Social evolution taught in sweeping strokes, with a constant eye on the possible and probable prolongations of the curve, should be, to the blind child, one of the most stimulating and educative of studies.

Geography

To obtain true and first-hand conceptions of the wide fields of knowledge which are grouped together under the name of Geography is, for the blind child, a task of overwhelming difficulty. It may indeed be frankly admitted that some aspects of this knowledge are better left unattempted. The phases of the moon, the geological epochs, the contour map of the Alps and the theory of the monsoon are items of geographical information taken almost at random which would mean an expenditure of time, labour, and ingenuity out of all proportion to the results most fondly hoped for. If, on the other hand, a wise restraint is exercised, sufficient remains to make up one of the most fruitful and attractive items in the curriculum. Geography becomes a challenge to the ingenuity and initiative of the teacher. The dangers of mere verbal description are so patent that he should be roused to invention. He must set himself to the devising of the many ways by which actuality and genuine meaning may be sought and found.

The Committee had before it the evidence of an enthusiastic teacher who supplied it with information about maps which are available to all and those which may be made by individual schools. This was valuable as an indication of how much a really zealous teacher can accomplish. We also had a description of apparatus for registering weather conditions used in another school. We are, therefore, convinced that serviceable maps and apparatus can be made and can be used with considerable facility. Nevertheless, the teacher of blind children, and particularly the geography enthusiast, must soberly satisfy himself that the labour involved in construction and in use is worth while. Certainly no large amount of time should be spent in map-work or in using apparatus. That there should be some acquaintance with maps and practice in using them is undoubted, and no school can be considered as properly equipped that has not a large-sized globe and a map of the world in relief on Mercator's projection. It should be remembered that the main use a map has for blind children is to show relative positions. As a blind teacher pointed out in a letter in *The Teacher of the Blind* (Nov. 1933):

> " In map reading it is probable that the blind child's difficulties will be more comprehensible to the blind than to the seeing teacher. The eye can find a desired point much more quickly than the finger ; a child may have quite a correct idea in his mind as to where a certain spot is, and yet he may give the impression that he is starting out altogether in the wrong direction. What he is really doing is setting off from some familiar landmark from which he may trace his course."

While cause and effect must be a relationship never far below the surface in the teaching of geography, it must be confessed that the labour of memorizing cannot be altogether removed. The teacher wants his pupil to take an intelligent interest in the happenings of the world, and this the pupil cannot do unless he has a good many facts stored within easy reach. An earthquake in Tokio or a drought in the Argentine, a new gold-mine in Rhodesia or a conference of scientists at Toronto, are phrases largely empty of meaning unless the boy or girl has a fairly accurate idea of the globe, and of the relative position of such towns and countries.

Between geography and other branches of knowledge there is a wide stretch of common territory, and so the teaching of it must often merge into the teaching of other topics, and particularly of history. Geography is partly, and for our purpose predominantly, a social science. It is a study of people in relation to their environment, and this human aspect is one that should be stressed in work with blind children. The study of environment itself will give opportunities for activity, and will form a useful complement to the more passive attitude of listening to description. Even before the younger end of this age-group, children will have rudimentary notions of geographical definitions, and these must be gradually enriched and extended. The infant's exploration of his classroom is his first scholastic essay in geography, and the older child will carry the same process further afield. The vivid presentation of life, say, in the Amazon Valley that can nowadays be brought into the classroom of an ordinary school by means of lantern slides or even films is unattainable by the blind child, but he can appreciate the climate from a visit to the palm-house of the nearest Botanical Gardens, and gain some idea of the noises of the forest from a few minutes in the parrot-house of the local zoo. The resourceful teacher will find many ways of bringing pregnant factors in the foreign scene to the sensuous, as well as to the intellectual, apprehension of his blind pupils. Expeditions into the parks and into the country should be made to add depth and fullness to the connotation of such familiar words as hill, valley, lake, river, and the like. That is the basis from which will eventually grow speculations as to the influence of climate on character, and the relations between a country's physiognomy and its government. These, it may be admitted, push out beyond the age-groups of this chapter, but the teaching of geography must, from very early days, be such as will encourage the drawing of deductions and the search for possible inferences. To understand the relations between the productions of a country and its natural regions and people is well within the powers of a blind student, and should prove a fascinating exercise.

History and geography will come together in many phases ranging from modelling in plasticine to dramatization. The more they are linked and inter-related the better will the teaching be.

Out-of-school activities should contribute their share in the enlarging of knowledge in this field. The Debating Society can contribute, and so can talks on the wireless. Most people, even among the bookish, gain more lively impressions from a personal narrative than from the written word, and so talks from people who have recently completed this or that journey should be welcomed to the evening lecture group. The vital thing is to arouse interest. Our aim must be to turn out pupils not so much with loads of detailed facts and statistics, as with a thirst for further knowledge and the ability to satisfy that thirst.

Arithmetic

In the teaching of arithmetic it is well to make sure that one is not unduly hampered by the once common practice of ordinary schools. There arithmetic used to dominate the time-table, and for a multitude of hours the harassed youngster waged a losing fight against the improbable vagaries of leaking cisterns and the still more unlikely situations wherein fifteen men worked eight-and-a-half hours a day as contrasted with twenty-three who worked only five-and-threequarters. It is true that with the traditional weights and measures under which the countries of the British Commonwealth labour, excessive time is required if complete mastery is to be attained, but this admission forces one to the query as to whether complete mastery is necessary for the average blind child.

Our pupils should be taught in such a way that they will have firmly grounded in them the ability to teach themselves in later life whatever processes a new situation shall demand. The calls for arithmetical knowledge and skill which will be evoked by the ordinary day-to-day existence of most blind men and women will be simple, and if the teaching in our schools enables them to meet these calls it will have done all that should be expected. Such economy, too, will have the merit of setting free many periods of the time-table for the pursuit of more cultural and more satisfying work.

The Taylor frame, although the best piece of apparatus that has yet been devised for its purpose for children (with the possible exception of the Pyke Glauser Braille Writer, which is ruled out by the high cost of production), is clumsy and inadequate. Perhaps its greatest shortcoming is that one is unable to write a description after a numeral so that the blind child is constantly in danger of forgetting whether he is dealing with apples or pence. For this reason some teachers use the writing-frame for arithmetic, but though it has a clear advantage in logical statement, it is more awkward than the Taylor board in the working of the sum. The teacher should, however, give consideration to the advisability of combining the two, not as a regular custom but on occasion using the writing-frame for statement and the board for working.

Though in the past the working of examples on the Taylor frame has been practised more assiduously than we can here advocate, it is noteworthy that few blind adults use this apparatus for their own needs. This is corroboration of our opinion that the arithmetical needs of the blind citizen are small and it is an additional argument for stressing the importance of mental arithmetic in the classroom.

It will be sufficient if blind children can be taught to understand notation and the simple arithmetical processes. This is much more important than that they should be skilled in working out long multiplication or division sums or other more complicated problems. Such a skill is largely worthless and can only be obtained at the sacrifice of valuable time. A true sense of proportion in our curriculum and time-table is only to be secured by the study of the probable needs of our blind charges in their after lives.

By the age of nine the average blind child will be able to add and subtract and will have a ready knowledge of the multiplication tables. With the aid of his frame he will be able to work out simple sums in the four elementary rules. He will also know the denomination of money and some at least of weights and measures. He should at an early age be introduced to the idea of fractional parts of wholes and be able to work mentally little sums involving fractions. At a later stage he will be taught to express fractions with type on his frame. The compound rules will then be taught, but the sums set to be worked should never involve tedious repetitions. Along with the teaching of vulgar fractions there should be the accompanying teaching of percentages, these being regarded as merely another form of fractional value. Children will readily perceive the connection between 50 per cent. and a half, 10 per cent. and one-tenth and so on. Later, proportion will be taught, but to the average blind child it seems unnecessary to teach the complexities of compound proportion.

A blind child should have practical knowledge of the denominations about which he is asked to manipulate numbers. He should be able to give with tolerable accuracy practical demonstration of an inch, a foot and a yard. He should be familiar with the idea of stepping out a room or a playground. He should know that a mile means a walk of twenty minutes and so on. Similarly he should have intimate and tactual knowledge of pounds and ounces, of pints and quarts. The working out of simple questions by actual doing of the weighing and measuring should be a recurring activity of the arithmetic hour.

Whether or not as part of arithmetic, the simple geometrical forms should be taught, and every blind child before he leaves this age-group should be able to recognize at a touch, a triangle, a sphere, a cylinder, a cube and the like.

Children who show a distinct aptitude for number should be encouraged to cover more ground than is indicated in the paragraphs above. Some will be fascinated by the abstract inevitabilities of Algebra and will be able to reason deductively in Geometry. Such pupils should have their tastes gratified and every encouragement given to them to penetrate as far as their understanding will carry them into the arcana of mathematics. In this region, as in every other, the gifted child should have his chance.

Nature Knowledge

The main aspects of Nature, ranging from observation of the fixed stars to microscopic studies of the very small seem so completely the object of visual perception that one's first reaction is to say that little can be available for the boy or girl deprived of sight. Yet when one looks more closely one sees that much information and experience can be brought within the apprehension of the blind child. The recognition of the bird by its note, of the tree by the shape and texture of its leaf, of the flower by its scent are fascinating avenues to first-hand knowledge.

The teaching of blind children should, whenever possible, lean strongly to the practical side. Pupils should handle and explore, should construct and do things. This is emphatically so in the study of Nature. The garden plot and experimental work in the classroom are of more value than the botany text-book, and the tending of pets than classifications of fauna. The aim of such work is to foster the child's interest in living things, to nourish his spirit of wonder and to encourage observation and inquiry. The lessons will follow the main directions of those with seeing children. It is true that the sketch-book and pencil will be absent, but the modelling of specimens will do something to fill even that gap.

Nature knowledge connotes an intelligent appreciation of one's organic environment and so must include a study of that most intimate circle of external reality, one's own body. Most distinctly is this so in the case of the blind child. His curiosity is inevitable and natural. It must be satisfied by carefully graded lessons on elementary physiology and anatomy with practical reference to health and hygiene. Such teaching on its biological side will lead towards instruction in the origin of life and the meaning of sex.

Two intertwining strands form a constant factor in the education of blind children. These are, first, reality in instruction, and second, conformity to the conventions of a five-sensed world. Both are strongly marked in any consideration of this section of the curriculum. We insist on the practical element in the teaching of Nature, but there are aspects of environment which a blind child can know only at second hand and these contain a number which should not be ignored. A person blind from early years cannot assimilate much real knowledge about the phases of the moon, the spectral iridescence of the rainbow, the infinite variety of the clouds or the matchless calm of the summer sky. These things and many more will remain round about the verbal level, but it is well that he should appear to take an intelligent part in such talk. Indeed, the intelligence need not after all be entirely fictitious. The scientist can discourse with wisdom on electricity and gravitation, yet no man knows a whit of what they are.

Elementary Science

While the lessons in Nature Study should be continued in a more advanced form throughout the school, the middle school or intermediate period should see the beginnings of instruction in general elementary science.

We feel that perhaps not sufficient attention has been paid in the schools nor, indeed, at Conferences of Teachers of the Blind, nor in the technical magazines to the possibilities of this branch of the subject for blind children. There is no reason why the courses in schools for the blind, with certain modifications, should not run parallel with those in elementary schools and attain almost as high a standard. It is essential, however, that these modifications should be kept well in mind and it will be necessary to devise adaptations of the commonly performed experiments in physical science usually used for demonstration purposes for seeing children.

It must be emphasized that while the teaching of science without experimental demonstration constitutes a false approach among seeing children, with the blind it is likely to accentuate the readiness to adopt mere verbalism in place of a true conception of what is taking place.

A good introduction to set courses can be made by a general survey of the science of everyday things. Older teachers will remember the type of lessons known as Object Lessons. These should be well co-ordinated and be progressive, but always illustrated with well-adapted experiments, using apparatus which the children can feel and handle.

The use of the wide range of constructive toys, such as Meccano, those models provided by the National Institute for the Blind and others, provide an admirable introduction to simple mechanics certain to arouse the interest of the children. Wheels, cogs, levers, cranes, pumps, locks, the science of heating and ventilation, traction, common commodities, such as soap, the candle, leather—these are the merest beginnings, but all are demonstrable, the children can touch and manipulate.

In the senior classes, well-developed courses in Sound, Magnetism and Electricity with the fascinating development of wireless, Heat and Elementary Chemistry may well be attempted.

We are convinced that there is ample scope for a real development of Experimental Elementary Science[1] in the schools.

Handwork

Like the rest of the school work at this stage, handwork should grow out of the occupations of the Infant room, and should prepare for those of the last phase of the Primary School when vocational bias will have begun to make itself felt. The majority of the pupils in our schools will have to earn their livelihood by handwork of one sort or another. This is regrettable in that lack of sight is a natural obstacle to manual dexterity and much time and labour must be expended before such a level of performance can be reached as will make industrial employment possible. Even when quality of output is good, speed of working lags sadly behind that of the competent seeing journeyman. This lag is commonly stated to be as much as 50 per cent. Yet till something better can be evolved for the average blind adult, to manual occupation he must go, and it is, therefore, of great importance that the training of his fingers and hands shall be begun early, pursued assiduously and developed along lines that are calculated to give the best results.

Just as physical education is not confined to the gymnasium so training in manual dexterity is not limited to the handwork room. It is a pervading function of school life. The blind child must learn to do things for himself, and as he climbs his way up the school these things must grow in difficulty and number. His standard of neatness and accuracy must also be correspondingly raised. The cultivation of hobbies, which involve varied skills and the use of mechanical toys such as Meccano, jig-saw puzzles and the like, will all contribute to the usefulness of his hands.

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[1] *The Teacher of the Blind* (June, September and Nov. 1927) contains a suggested outline of lessons in Sound, Chemistry, and Heat, adapted for blind children.

Children, and this includes blind children, like doing things, and so the teacher of handwork will find his pupils meeting him more than half-way. This initial disposition towards co-operation must, under guidance, grow into purposeful interest. The child is learning to do something of which he can see the use and is acquiring a skill whose serviceableness both now and in later life he can immediately apprehend.

Handwork is a useful instrument for encouraging the love of beauty. The elimination of visual impressions makes a serious gap in the approach to æsthetics, and every endeavour should be made to utilize the avenues available. The factor in handwork, or at least in such forms of handwork as are attempted in schools for the blind, which must appeal strongly to the pupil, is that the ideal and the real lie close together. If a student of English is set to write a sonnet he knows that the best he can do will fall far short of his desire. The infinite flexibility of his material and the illimitable range of mental pattern over which his fancy roves, fill him with a sense of inadequacy. He dreams of clothing majestic thought in words of immortal music and then realizes that creative genius of this order is given to but few. The blind child, on the other hand, who is busily constructing a pulp cane basket knows that with willingness to learn and attention to detail, with patience and perseverance he may one day make that basket as well as it can be made. Here, then, is to be found a practical way of inculcating a love of the beautiful. The child will become ambitious to attain real craftsmanship and will take pride in his work that it is good.

The chief lines of handwork taught are modelling, raffia work, light basketry, chair seating and knitting. Modelling is excellent for the teaching of form and proportion. It also provides a plastic material in which the child can work out his ideas with admirable educational effect. The freedom which clay or plasticine provides is in striking contrast to the constriction of such an occupation as the caning of chairs. Here the tedious repetition of the same stroke and the entire absence of any generous freedom of movement make it a pursuit of small educational value. Precision and exact conformity to rule are qualities which can wait for a later stage of development, and chair seating offers little else.

The lines along which handwork should be taught will not be confined to those just mentioned. The programme must be as varied as possible and such as will stimulate the inventiveness of the pupil. The teacher must be constantly experimenting to discover fresh directions of activity. He must not decide that this or that type of work is unpromising until it has been tried. On the other hand, it is important that he should resist the temptation to force the blind pupil along certain ways because these have been of advantage to the seeing and have supplied material of instruction which has proved successful on account of its visual appeal.

It need hardly be added that the variety must be genuine. It will not be obtained, for instance, by ringing the changes on the gamut of the colours in raffia mats. Even if the pupil's interest can be aroused by the enthusiasm of the teacher it is an interest which is educationally worthless.

The following which have been tried with more or less success in different schools are mentioned merely to show the wide range that may be covered by an ingenious teacher ; the making of artificial flowers and jewellery, bent iron work, tinsmith's work, brass chasing and leather embossing.

These are all far removed from vocational training and at this stage this is well, but there is one minor skill which will be of use both in school life and later which may be mentioned here. This is the simple form of bookbinding needed to fasten together the child's collections of Braille manuscript sheets and make them into tidy volumes for his private library.

Woodwork which is taught to advantage in some schools should find a place in all. Too little has been done in the past in training the blind to the use of tools. The blind boy with a mechanical aptitude derives abundant pleasure from his constructional hobbies. Teach him to use the saw, hammer, chisel, gimlet, screw-driver and the rest and he will revel in the joy of creation from a soap-box to a wireless cabinet. The elements of scientific knowledge which deal with the magic of broadcasting will make the boy or girl keen to know the component parts of his radio set and to construct his own. Such linking up of knowing and doing and the constructional experimentation that springs directly from it are of substantial educational value.

The function of training in manual occupations is to make the child alive in his hands. It is to give knowledge and direction to his exploring fingers, to give skill and the desire to use that skill in fresh construction. It is to widen the circle of ideas in solid concrete fashion and to increase the power of the blind child to cope more effectively with his immediate physical environment. We live in a machine age and the blind child must not be kept in ignorance of so notable a feature of the present day. He must be allowed to handle pinion and crank, cylinder and piston, to get some rudimentary notions about the transmission of energy and the governing idea of the steam and internal combustion engine. There are few schools which cannot provide a motor-car of some sort as an object lesson in dynamical science.

Square Handwriting

The teaching of Square Handwriting has recently been included in the work of a number of schools for the blind. This simple form of writing has been introduced into

England from Perkins Institute for the Blind, Mass., U.S.A. It is found to be effective for use by blind people for communicating with those with sight whether or not they have previously been able to write ordinary script.

A pencil is used on writing-paper clipped on to a grooved card ; the grooves, felt through the paper, provide guidance both for straightness of line and the formation of letters, according to concise directions, which can be committed to memory. A booklet is published by the National Institute for the Blind giving the method of procedure, both in Braille and print ; it includes directions for the formation of letters, figures and punctuation marks, together with a chart illustrating in characters raised for the touch, this simple rather square style of handwriting. Individuality develops both in method and style.

The time taken to learn to write legibly and with fair fluency varies strikingly with individuals, from a few lessons with practice for a week or two in the case of the most capable, to many months of short regular lessons for children lacking in manipulative skill.

The value of the handwriting appears to be largely utilitarian, in providing a convenient inexpensive substitute for the typewriter for unofficial letters or other matter that the blind writer does not need to read. It is found to satisfy a very natural desire " to write like other people." For some it may afford chiefly a means of writing a legible signature, acceptable, if an indelible pencil is used, for cheques.

For partially sighted children, square handwriting also has some value. Its practice leads to a good clear style that can be written without risk of eye strain and is likely to be more easily legible to the child with defective sight than a less formal script.

Music

There are many subjects upon which a high value is placed in ordinary courses of education which necessarily must have a humbler status in schools for blind children. On the other hand, there are some subjects which in schools for the seeing are still too often regarded as being accessories or, in some sense, ornamental, which are of the highest importance in the education of the blind. Music is certainly one of the most important of these. To the blind child it largely takes the place of the æsthetic gratifications of which he is deprived through lack of vision. He can know nothing of colour or composition in pictorial art, and little of design or decoration in sculpture or architecture ; but the counterpart of these things the blind child will obtain in tone and melody and in the form of musical compositions. Unfortunately all blind children have not the necessary initial equipment. It is a common fallacy to suppose that blind children are endowed from birth with special musical gifts. Some undoubtedly are so gifted, but not because they are blind. It is true that where there is a modicum of musical ability the patient teaching and constant practice which is obtained in a school for blind children, particularly a residential school, can raise that meagre talent to surprising heights. The sense of time and rhythm can be developed from the earliest years by means of percussion bands and delight in melody is induced by the singing of nursery rhymes and folk-songs. Vocal work will, of course, be continued in a more advanced form amongst the children we are now considering. Here, again, it must be remembered that just as in the ordinary school a percentage of pupils have no particular talent for singing, almost all can be trained to some extent in the art of listening.

For class singing purposes there is now no dearth of very suitable music and the teacher has a wide choice. Children who show any musical aptitude should be taught Braille musical notation, and in class should be encouraged to sing from " sight " and not by ear. Apart from the necessity of having to read Braille music if an instrument is being learned, a knowledge of Braille music may be of valuable service throughout life. We desire to stress this point, and though it may be considered by some to be a counsel of perfection we affirm our belief that skill in reading and writing Braille music should generally be expected from these children under normal circumstances by the time they have completed their school course.

Every child should be tested with regard to his ability to learn a musical instrument, and where the ability is present regular lessons should be given. Piano playing will be the most useful, but the piano will not be the only instrument. The evidence we heard from blind musicians was in favour of the more gifted children being taught the violin or some other instrument as well as the piano. A knowledge of more than one instrument is particularly important if music is to become a vocation. Where a school possesses an organ, first lessons in organ playing may well be begun while the child is still at school. We are glad to learn that some schools now have their pipe bands, and that the value of music for recreational purposes is becoming more fully recognized. Percussion bands are now quite common in the best nursery and infant schools, and a school orchestra would seem to be the natural development. The love of orchestral music is being fostered through the opportunities offered by the many orchestral concerts which are especially arranged for children.

It is unwise to dogmatize as to the age at which a child should begin to learn to play an instrument. That depends on the child and not on the teacher. Some children at a very early age display such an aptitude and such a desire that their needs cry aloud for gratification and they may have first lessons at the age of 5 or 6. There should, however, be no pressure, and if inclination wanes the lessons may well be discontinued for a time. To many children the desire does not come until later, and it is not an uncommon experience that a child may make frequent beginnings without much success and yet, ultimately, when interest has become fully aroused, become a proficient executant.

It should be remembered that except in cases where music is to be adopted as a profession mere technique is not of first importance. What does matter is that the child shall be able to derive pleasure and mental satisfaction through this medium. It is worthy of note that even if music is not the main vocation many items of supplementary income can be obtained by those who have reached a certain level of attainment through early lessons. Moreover, as a social accomplishment in after-life, the ability to play or sing will be a desirable asset.

In many schools children are regularly presented for the examinations of such bodies as the Royal Schools of Music, of Trinity College and the Guildhall School of Music. This is commendable so long as success at these examinations is not overestimated. The examining bodies while rightly demanding the highest standard have always shown sympathetic understanding of the difficulties of blind candidates, and in place of sight-reading tests have substituted others which may be regarded as equivalent.

In teaching music, lessons on harmony and simple composition should be given. These can be begun in very simple forms and the lessons on melody-making broadcast by Sir Walford Davies might well serve as models. The simpler forms of musical composition can readily be taught to quite young children. Children thus begin to appreciate music intellectually as well as enjoying it as a pleasurable sense-impression.

A wise teacher will introduce musical history at an early stage. This can be simply done by associating the composer's name with the composition being learned. " Now, I am going to play you a little tune by a great musician called Handel who lived many years ago." This can later be followed by—" I want you to play that little tune written by Handel." As the child advances, significant facts about the composer may be told, these being introduced during the piano lesson and not in a formal manner. The lesson will gain in interest and lose in monotony.

Formal lessons will begin at a later stage and this historical knowledge should be taken into account in assessing the total of the child's general historical knowledge. It is certainly as generally important to know of Purcell and the good work he did as to know about his contemporary, Titus Oates, and his evil deeds. Musical history can be made intensely interesting not only from the personal point of view but in tracing the growth of music from its primitive form to music as we know it to-day.

In most branches of human activity blind persons must feel at a disadvantage ; musical appreciation is not one of these. The blind music-lover is able to meet the seeing amateur with a comforting sense of equality; it is imperative, therefore, that this fortunate circumstance should have every opportunity of full development.

CHAPTER 5

THE AGE PERIOD FROM FOURTEEN TO SIXTEEN

I

Aptitudes of which early promise has been given and those which have displayed themselves with more certainty during the middle school life will now be confirmed. The future of the child will now have to be decided, and education must take on a more practical aspect than it has hitherto done. At the same time, care should be taken that the bias towards occupational specialization should not be allowed to interfere with the fundamental purpose of the school which is to give as good a general education as it possibly can. Specialization is permissible to some extent in handwork, but the considerations set out in the previous chapter still hold good. Handwork will continue to be taught for its educational influence, and without any thought of shortening the course of technical training which will begin when this stage is reached. Shades of the workshop will fall all too soon upon the growing boy. The aim of the school is to make the boy and girl as competent as may be to cope with, and to enjoy, the multiform impact of life, to become, as far as limitations of circumstances permit, complete human beings, rather than to inculcate the skills required by this or that craft.

We, therefore, deprecate the practice followed in some schools of devoting half-time to occupational handwork, except in the case of pupils who show no prospect of benefiting by continued study of general school subjects. Six hours a week should be sufficient for manual training even at this stage and, as in the years from 9 to 14, the programme should be a varied one. Of course, the manual dexterity thus obtained will eventually be concentrated into the vocational channel. A boy who is to become a piano tuner and repairer is acquiring skill which is essential to him, if occupied in making models in the woodwork shop, while ear-training can be carried on without his having a tuning hammer in his hand.

It is somewhat different in the case of those who are to make music their life-work. If they are to attain anything like distinction they must specialize early, and in framing a curriculum for them it must be remembered that many of the subjects they have to study have a cultural value quite apart from the technique of the musical instruments they may be learning to play. A pupil who is learning harmony, counterpoint, composition, form and so on—and these must all be begun at an early age—is certainly having much mental activity. On the other hand, there is a danger that the education of the musical may become too one-sided, and anything like an obsession must be avoided by providing as wide an outlook as possible. A blind person to be a success as a professional musician must have a good command of English, should have a knowledge of English literature and be acquainted to some extent with a foreign language.

In framing a curriculum for this period, we are of the opinion that the greatest elasticity should be allowed. The pupils should be brought more and more into contact with the life of the everyday world, and a very large amount of freedom and self-government extended to them. Owing to irregularity of admission, to variety of attainment and to future prospects, pupils must be taught in fairly small groups. Private study even in school hours should be encouraged, but it is essential that whatever work is assigned to them should be done thoroughly. Much attention should be paid to the expression of thought in both spoken and written language. Directness and simplicity in style should be aimed at, for the tendency of the blind, when they take pleasure in words, is to fall into the grandiose, through an over-fondness for the ornate. The reason for such a tendency is not difficult to find. It is natural that the blind should revel in a medium where they are on equal terms with the seeing, and that in the happy exercise of their powers they should often reveal a weakness for its undue elaboration.

In many schools the debating society is much favoured as a means of developing ready speech and readiness in expressing ideas. This is to be commended, but it is important that the Chairman should so guide the meetings that the endeavour is always the clear exposition of views and the search for truth, rather than the making of debating points or the intellectual pastime of special pleading. Better still is the dramatic society, particularly if it is contrived that all have an opportunity of shining, and that the best parts do not always fall into the same hands.

From much evidence we are gratified to know that most schools have their Guide and Scout Troops and that in some the organization is complete from Brownies to Rangers, from Cubs to Rovers. In several schools camping out has become a regular practice and this is admirable, especially if it can be carried out in conjunction with troops of seeing boys or girls. When the great Scout Jamboree was held at Birkenhead in 1931, quite a number of blind scouts participated from all parts of Great Britain, and the experience must have been most valuable to the boys.

As it is within the bounds of possibility that any pupil may be engaged in some form of trading in after-life, commercial arithmetic should be taught and a little book-keeping, sufficient at any rate to allow a blind person to keep a record of business transactions. Typewriting, too, should have its place in the curriculum. We are glad to note that many schools either assist their pupils on leaving to obtain typewriters, or present them to all likely to make use of them. A typewriter is a useful part of the equipment of a musician, a piano-tuner, and many engaged in home occupations. Before a pupil leaves school he ought to be able to write a business letter in terms of general usage.

There is some danger that to the pupils in a residential school where little contact is made with household duties, an unreal estimate of home life may be formed. Meals are cooked and served, clean clothes provided, rooms cleaned, and mending done as part of the accepted order of things, and no thought is given to the varied work which provides this comfortable state of affairs. Home life is usually associated with holiday periods, and on these occasions the child is too often treated as a visitor and not expected to help in household duties, nor do the majority of parents think their child is capable of doing so. It is essential to break down this unreal conception of home life, and to train blind children in household duties.

From the age of 9 to 13 years, practical duties should be undertaken in the housewifery room, such as washing up, cleaning spoons and forks, laying a table for meals, and washing clothes. Bed-making in the dormitories, and personal cleanliness in connection with teeth, hair, nails, and appearance generally form the subject of talks on hygiene. At the age of 14 years the blind girl is able to follow a more advanced course which will embrace cookery, laundry, and general home management.

As with other practical lines of instruction, the classes must be small, so that individual work can have full scope. It is often helpful to let the children work in pairs; one gives confidence to the other, but each is responsible for a definite task. A period of from two to two-and-a-half hours per week should be the minimum, in order to teach thoroughly a correlated scheme. Few schools for the blind have the advantage of modern housewifery quarters and equipment and we recommend that such provision should be made general ; in a residential school there is always opportunity for following a useful course.

In co-operation with the domestic staff, dormitories, bedrooms and sitting-rooms should be systematically "turned-out," glass, furniture and floors cleaned. Definite instructions should be given by the teacher in the method and order of work in a household. The pupils should make short notes on these various duties. At the end of the course a hand-made book of useful hints in household management and cookery recipes will have been made and will be of permanent value. Care must always be taken that theory and practice go hand in hand. Co-operation with the domestic staff will again provide a supply of useful articles of different textures. Preparation for washing day, the washing of woollen and white clothes, coloured and household equipment can be demonstrated and practised quite efficiently in miniature. All the steps for the completion of the family laundry—mangling, starching and ironing—should be taken under supervision. Great care should be exercised in the handling of irons. The most satisfactory type is the electric iron because of the ease of its working.

In the cookery lessons simplicity should be the keynote. A suitable selection of menus should be thought out by the teacher and carried out by the pupil. It is better to teach a blind girl to bone a herring than to fillet a sole. Variety, economy and food values should be considered, and the need for scrupulous cleanliness in cooking utensils and sinks. The cleaning and preparing of vegetables for soup, the cooking of joints, and methods of using up cold meat, simple puddings and pastry all lie within the capabilities of the blind pupil. When the cookery course is completed, the pupils ought to be able to cook a breakfast and dinner under supervision, and should be able to estimate the cost. This matter of cost is important. The pupils should accompany the teacher on several of the shopping expeditions, and thus learn the prices and quantities of goods required. Valuable knowledge can be gained by visits to stores and Trades Exhibitions where household utensils and equipment may be examined and labour-saving devices studied with the help of an obliging salesman. These visits widen the outlook, and show the importance of good household management. Darning and mending of a simple character, the sewing on of buttons and loops, and the construction of household articles such as ironholders, dishcloths and dusters, all add to the interest of the Domestic Science Course. Although accidents are no more likely to occur than with seeing pupils, a first-aid outfit should be kept in the department in readiness for immediate treatment of cuts and burns.

The effect of the housewifery training will be shown in the home. Co-operation with the parents by means of interviews and correspondence should ensure that the pupil is encouraged to help with household duties and not sit in dreary inactivity. On the completion of the course the majority of the pupils will be able to look after their personal appearance, keep their immediate surroundings clean and wholesome, shop for their needs with economy and discrimination, and cook a simple meal.

As an important aim in education is to make good citizens, considerable thought and care must be devoted to this end. At this age, though children are still largely self-centred, the horizon of interest is gradually widening. They are concerned with a larger environment than themselves and their immediate concerns, their homes, their school, their companions. The town, the county, the country, government and the state, all these take on a new significance.

With so much to do there will be little time available for close study of any particular science, but it is more than likely that some curiosity and interest may have been aroused by listening to a wireless talk, by some accidental occurrence, or by something casually read, and further knowledge may be desired. There may not be time or opportunity for formal lessons, but there is now a fair supply of Braille books on most scientific subjects. There is, however, one branch of science which should be taught with care and thoroughness. This is the laws of health and the care of the body. In a former chapter we recommended that some knowledge of Human Physiology and Anatomy should be taught. We think such teaching should be continued during the later period. It is quite possible for blind people to learn these sciences in some detail and such knowledge may be of very practical value. It is, indeed, part of the everyday knowledge that everyone, blind or seeing, should possess.

During the period of early adolescence, the pupils will become more susceptible to æsthetic influences. Æsthetics should not be treated as a separate topic ; appreciation of the beautiful can best be acquired by the child being in constant and close touch with what is beautiful. An atmosphere of beauty should permeate the whole life of the school ; the buildings themselves should be pleasing and orderly ; the grounds in which they stand should be as spacious as possible. The careful rendering of morning and evening prayers, the taking part in, or even listening to the best vocal and instrumental music, the reading of good poetry and prose, eurhythmics and folk-dancing, participation in dramatic work, the listening to the songs of birds, recognition of plants and flowers by their forms and scents, all lead to a knowledge of and a love of beauty.

We are surprised to learn that some schools do not make much use of their school libraries. A few do not even possess one but depend entirely on the resources of the National Library. It is impossible to overrate the value of this national collection of books, but there are many volumes which should always be in a school for use or pleasure. Indeed there is a danger in having too wide a choice. In former days, when the amount of Braille available was much more limited, children read their favourite books over and over again, and became thoroughly acquainted with them and loved them. A book which is to be sent back to a central library is often merely skimmed. It will not yield up its treasures to such perfunctory treatment. A school library should contain, not only the children's classics, but also books particularly attractive to children of the ages now being considered. There should be a good deal of poetry, much of which may be modern verse. Obscure as this appears to an older generation it is not so foreign to those who are growing up to-day and have not based their expressions on an older idiom. Modern drama, too, should be well represented. The plays of Barrie and Drinkwater are full of appeal to young people, and the plays of Galsworthy, apart from their own intrinsic merits as works of art, will give food for thought on the social questions of the day.

The cultivation of pleasant and gracious manners is essential. Blind people find it difficult enough to obtain a footing in social life as it is, and if they are handicapped by boorish ways they will find their company even less desired. The manners of a school will be very largely the reflection of the manners of the staff and, in residential schools not only of the teaching staff, but of the domestic staff also. This should weigh in the appointment of nurses and attendants and similar officials. One of the assets of the blind, and one that is by no means negligible, is the goodwill of the seeing. It therefore behoves the blind, if for no other and more exalted motive, to be considerate and obliging to those from whom so much is expected and received. Social training comes in here, for if the blind are lacking in courtesy it is because they are also lacking in knowledge. It is not unknown for a blind man to brush his way along a crowded pavement, heedless of the trouble he is causing. It is not unknown for a blind man receiving company to fail to rise to welcome his guests, and after evening has fallen to allow his friends to sit in darkness. These are faults of thoughtlessness and ignorance, and the teacher must see that correct deportment in the daily contingencies of social life is instilled into his pupil. It is unfortunate that in this social training the influence of the school is not always reinforced by that of the home. Good manners and good speech may even be written down by the home as evidence of effeminacy or servility. The more social contacts of the right kind there are, the more spontaneous and natural will good manners be. The stilted manners derived from formal training savour too much of the etiquette book. The best manners are those that come from frequent intercourse with the various classes in social life. This intercourse may be in a drawing-room or in a tram-car. This corroborates our contention that it is desirable for the blind pupil to mix freely with the outside world.

Nothing has been said, so far, about discipline. It is a word of ill omen, and perhaps nowhere more so than in blind schools. There can be no doubt that in former days discipline was too rigid and hard in many schools. Too frequently former pupils regarded their old school with awe rather than affection. Those days have gone, and there may be a danger now of laxity instead of rigidity. But the general atmosphere is certainly happier and more wholesome than at any other time, and if the new freedom is judiciously controlled all may be well. In many schools a considerable amount of self-government is practised ; clubs are managed by committees of pupils elected by themselves, magazines are edited and amusements organized, independently of the staff and honour takes the place of restraint. Some schools have a system of prefects, and some are divided into "houses." Some schools, again, have their school colours, others their school song. In many ways a corporate spirit is being developed which is not only good for the pupils while they are at school, but will prepare them for loyal service to the community in after-life.

We have commended the banishment of the feeling of awe and fear from school life. There is, however, nowadays so much friendliness between teachers and pupils that there is a danger of this degenerating into familiarity. A balance must be kept, and while there should never be a parade of dignity, no teacher should throw away the status which is his by right.

Recreation and training for leisure must also be considered. A day in the life of a pupil at a school is a fairly full one. What with the ordinary routine of work, with probably additional hours to be spent in practising a musical instrument or in the production of a play, what with such organized activities as scouting and guiding, there are not many unemployed moments. It is well, however, that there should be some completely free periods when inclinations can be gratified and games be indulged in with one object only, that of pleasure. We shall not dwell upon the various forms of athletics practised—cricket, football, rowing, swimming, and so on. We fully realize their value, but it is not all who can take part in such strenuous activities ; we are thinking rather of forms of recreation which may serve for life and have their social implications. Many blind people become proficient at such games as chess and draughts, and in the former it would not be difficult to give instances where great eminence has been attained. We think all blind children should have the opportunity of learning these games. Whist is the most frequently played card game among the blind, and it seems to us an excellent practice that the older children should learn to take part in whist drives. Such indoor games as badminton and table tennis are, of course, impossible, but carpet bowls and deck quoits are games that have frequently been enjoyed. No discouragement should be shown to any hobby ; if it is giving pleasure it is accomplishing its object.

II

We have not thought it expedient to go through the various sections of the curriculum in detail. The teacher must be guided by his knowledge as an educationist, and by the peculiar circumstances of his school and scholars, to work out that programme of work which is best suited to them. We have stressed the desirableness of elasticity, and it would, therefore, be unwise to frame a syllabus which, it might be thought, should be imposed on all schools irrespective of individual factors. We have endeavoured rather to indicate the general framework within which most schools can fashion their schemes of work. Details will vary, but there must be a common purpose and a common hope. What is to be the product of these formative years during which the school has been the chief moulding influence? We quote a passage which, although written a score of years ago would seem, with some approach to adequacy, to summarize the answer to that all-important question:

> "He [i.e. the blind pupil] should be physically, mentally and morally developed to the extent of his nature. The most and best should have been made of him. If it is not much, the exceptional case, the teacher must be able, with a clear conscience, to blame the material and not the system.
>
> "In most cases, it will be much. He should be courteous, modest, and not without the old-fashioned virtue of prompt obedience to duly constituted authority; truthful and straightforward, with a cultivated dislike of sham and humbug, particularly in himself. He should be alert and observant, with senses trained and responsive; fond of the open air, and appreciative of the sounds and scents of the country; keenly alive to the beautiful, and quick to recognize it in nature, conduct, literature, or music.
>
> "He should be able to express his ideas in clear, direct language, and take an interest in the ideas of other

people. He should be able to read with fluency and understanding ; to enjoy good books, and to show some rudimentary literary taste and discrimination, in the acquiring of which he will have made the acquaintance of many English classics, and committed to memory much poetry and a little prose.

" He will know enough arithmetic to serve his purpose in all likely business dealings, and will not have had encouraged in him a distaste for number through the tedious manipulation of a host of meaningless ' examples.'

" Through his history and geography he will understand the present as a point in an ever-widening stream of human progress and endeavour. He will have been shown the origins of the stream, and the trend of its early centuries. He will have followed the gradual increase in the environmental complications which beset modern man and modern society, and will have helped to gather for himself indications of the probable further course of that society's development. He will have been fired to resolve that his own part in the master-building of the future, however small, shall be worthily conceived and carried through. He will be a citizen ready trained for that world which is to be his—the world of to-morrow."

Our attention has been called to a change which is said to come over the pupils in our Institutions when the age of 16 is reached. A contrast is made between the brightness and vivacity of blind children and the apathetic depression of many of their elders in the blind world. No one can deny that the complaint is well founded and so demands some investigation. Naturally it is a problem which overlaps the periods before and after 16, and so could be treated in our discussion of either. For convenience we consider it here.

Of course, too much must not be laid to the charge of blindness. The ordinary lad of 17 or 18 is, in many respects, a different being from what he was at 9 or 10. Growth and development, altered circumstances and added responsibilities have had their way with him, and left him changed indeed. This natural metamorphosis is the lot of all, both blind and seeing, and so the difficulties and dangers that manifest themselves in the healthy development from child to manhood must be kept in view. The body seems to grow too rapidly for the machinery of perfect mastery and control. One of the functions of athletics is to meet this case, and make the body work off its exuberant young animalism in physical labour of the most exhausting type. The mind, too, has its growing pains. It is reaching out to a larger universe, but failing to apprehend its principle of unity, is bewildered by apparent chaos. Here the antidote is found, ready to hand, in the mental and moral discipline that come from compulsory daily work and, in hours of leisure, from healthy intercourse and recreation. To some, the physical and intellectual turmoil here suggested may seem an exaggeration, and happily in many cases, wise control and favouring circumstances secure a passage without disaster through the perils of the adolescent stage ; but the perils and the turmoil do exist, and many a lad only reaches to manhood with scars and twists and moral callosities that will last as long as life itself.

Do the circumstances of the blind pupil tend to make transition easy or difficult, to minimize or aggravate the dangers, to help or hinder normal and healthy development?

Athletics and the discipline of regular work are largely saving agents because they preclude excessive opportunities for the mind to dwell upon itself. Solitary brooding is the habit most to be dreaded at this stage, for then mind and body conspire to bring about a common downfall. The circumstances of the blind, by being in many respects restrictive of personality, drive the mind back upon itself, and so make this habit all too prevalent.

A chronic declension from normal health, be it physically painful or not, is a thorn in the flesh which by its never-ending annoyance is bound to wear human nature to irritability and discontent. Does this hold good in the case of blindness? To a casual observer, the blind are habitually placid, a condition which may indeed grow to unresponsiveness. They are often cold and inaccessible, while giving the impression that the personality behind the barrier is calm, self-contained, and undisturbed. Such judgment is frequently but half the truth. To many, blindness or defective sight is a strain upon the nervous system. The constant limitations, the ceaseless accommodations strike back and by the cumulative effect of a myriad pinpricks untemper the most resilient spirit. Experience has taught that giving way to fits of irritation makes matters worse by alienating comrades and increasing loneliness. Thus the moods of pent-up exasperation are not relieved by any outward show, but driven inwards to rankle there.

Blindness has many effects upon the mind and character, but an instructive sidelight may be let in upon a large proportion of these effects by considering blindness simply as a curtailment of the sensible world. Blindness is the subjective annihilation of the visible universe. The ordinary man who sits idle is at least looking about him, and his roving glance carries the mind with it, arousing random chains of associated ideas, and striking here and there fortuitous sparks of interest. The waywardness of momentary impulse may prevent connected thought, but the objective reality always stimulates to expansion, not restriction, of the ego. The visible world is rich and manifold; custom cannot stale its infinite variety. The blind man who sits idle tends to forget the outer world, and is immediately lost in the region of his own cogitations. There is a consequent presumption that, in the average case, the body will be unable, in Browning's phrase, "to project the soul." The external universe cannot become subjective and internal. Much of the external world must remain exterior; for the blind pupil to sit idle means, all too frequently, to brood.

The limitations which blindness imposes upon the individual with regard to choice of trade or profession, and the narrowed prospects of a successful career, are bound to affect the spirits and in time the disposition. This circumscribing of opportunities does not press upon the schoolboy. He moves upon an equal footing with his fellows ; life is full and competition fair. If he look at the future, it is in the strength of his day-dreaming and with all a boy's tacit assumption of special dispensations of Providence for himself. The state of childish unconsciousness of life's responsibilities comes sooner to an end with the blind than with the seeing. They grow old quickly, and while the young men in the great world are still dreaming their dreams, disillusionment is setting in with the blind. The threshold of manhood brings to the ordinary lad visions of fresh fields that lie open for the conquering, but to the blind the realization that his world is a paddock with a lock upon the gate. Life is narrowed at the moment of unfolding. He realizes the actuality of the economic struggle, and the soaring ambitions which are the life-blood of a young man's fancy are whittled down, all too soon, to the ideal of a living wage. This acceptance of his position in the material scheme of things may be made with fortitude, but even in the act of resignation there must rise feelings of envious sadness at so many openings into successful fields of enterprise and labour closed against him because of his handicap, so many facilities for recreation and enjoyment, so many avenues to high endeavour barred. The blessing of sight is naturally magnified in his mind. With sight, the blind man feels, all things are possible.

That is one phase, but the mind of every man is a compound of many contradictories, and there is often found among the blind a strange mood of apparent condescension towards the seeing. It seems at times as if they were driven into an attitude of assumed superiority to those who are dependent on the ministrations of the sense of sight.

The seeing are doubtless to some extent responsible for this mental pose by their unreflecting wonder at any triviality accomplished without sight. From the intercourse between this type of the seeing and this type of the blind comes much talk of compensation, a blessed word whose main function is to supply an anodyne to the feelings of the compassionate. A section are always ready to follow where the imagination of the seeing leads, and we have classic examples of blind men declaring that they would not see if they could. The avowal is praiseworthy in so far as it springs from the accomplishment of a satisfactory adaptation of limited means to the business of living, but it is folly to accept a blind man's valuation of an unexperienced sense.

It is impossible and indeed unnecessary to form an exact estimate of the extent to which the school can mould the minds and characters of its pupils. At the same time the profundity of its influence must not lead us to ignore the limitations under which it works. One of these, and a potent one, is that heredity and early environment often pull against the school. Most of the pupils come from poor homes. "All men," said the Stoics, "are by nature free and equal," but the circumstances of early nurture have a deadly power of stultifying nature. Early nurture is an inheritance which does not lightly pass away. The school fights against it, but it is a constant uphill struggle, and in many cases the battle is still undecided when schooldays end. Too often school discipline only imposes a mask of respectability, which the lad will throw away with his schoolboy dress as soon as 16 is reached. This tendency to remain on the same plane as that on which life found him, is one whose pertinacity must sadden the heart of the teacher. *Naturam expellas furca, tamen usque recurret.* The higher aspects, the wider outlook of education, are refused, and the boy grows up to live the stunted mental existence prepared for him in the cradle.

Even among the better type of pupil there is no doubt that the close of schooldays is apt to be a time of fear and depression. There are adventurous spirits eager for the rough and tumble of life, but in a school for blind children these must be in a minority. It is, however, worth noting that this despondency, this dread of an uncertain future, this timidity in face of new responsibilities, is by no means confined to the blind. The following sentence is taken from the autobiography of one who when he left school had every anticipation of a safe, successful and even brilliant career:

> "When the last day came and I went round to say good-bye to the masters, I had a feeling as though I stood on the brink of a dark abyss and was passing out of the sunlight of a known and kindly world into a waste of mist and friendlessness."

PART IV

CONTINUATION COURSES

CHAPTER 1

VOCATIONAL TRAINING

One of the most striking features of the education of the blind is its continuity. It flows without a break from Nursery or Infant School to the close of vocational training. It is thus much more complete than the provision made by the State for the ordinary child. That youngster leaves the Public Elementary School at the age of 14 or thereabouts, and goes out into the industrial world to learn his future occupation in some modern phase of the old order of apprenticeship, or, as happens in too many cases, to drift into some occupation which holds out little prospect of permanent employment. He has a wide choice, but the path to his life's work is haphazard and liable to fortuitous twists. The blind child, on the other hand, is within the formative influence of a directive and happy school environment over a wide range of years. He spends his full time, except for the holiday periods, under the sympathetic guidance of skilled teachers, concerned for his physical and mental welfare, and this from early childhood, through adolescence, until manhood is reached. It is a scheme of things that may well create the envy of those in charge of seeing children, and which must impress upon the teacher of the blind a deep sense of his opportunity and corresponding responsibility.

At the age of 16, then, the blind boy or girl enters on his technical training. The appropriate institutions usually include courses in some or all of the following :

Music and/or Pianoforte-tuning.
Typewriting and Shorthand.
Basket-making.
Brush-making, drawn and pan-work.
Boot-repairing.
Mat-making.
Mattress-making and Upholstery.
Flat Machine Knitting.
Circular Machine Knitting.

The number is indeed sadly limited and the pupil's freedom of choice unfortunately small. It may, however, be argued that if a child is manually skilful he or she is, on the whole, as agreeably occupied in one industry as another, and the wages which can be earned in the above-mentioned trades are probably as high as in any other that might be found suitable. Most of the recent suggestions for alternative manual occupations have been concerned with repetitive operations where the blind worker is in competition with semi-skilled labour with the usual consequence of poor wages. This is not to say that every effort should not be made to explore all possible avenues for fresh lines of work, but it must be maintained that the advantage of an elaborate training, as for example in flat machine knitting, is that the blind girl is made into a competent mistress of her craft, and ranks definitely on the level of the skilled worker.

The Committee, after full consideration of all the facts, are unanimously of the opinion that for the training of the adolescent a period of not less than four years is essential.

At the beginning of the term after that in which he reaches the age of 16 the pupil should commence this second stage. He is now to be prepared for the particular occupation at which in all probability he will spend his working years. It must be repeated that in spite of the change in the means of instruction, it is the same one continuous process of education that is being carried on. The boy and girl are being trained for life as well as for livelihood. The curriculum must, therefore, include non-vocational studies as an integral part. The aim of such studies will be to widen the mental horizon, to multiply interests and to supply health-giving activities, including physical training. We defer more detailed consideration of this cultural programme till we have commented on some aspects of the technical side of the training, but it will be appropriate here to point out that the basic reason why the pupil should be entered for the period of at least four years pertains to education rather than to training.

In the preceding chapter we have mentioned that blind pupils become aware in adolescence of the limiting effect of blindness on the possibilities of work and pleasure. Thus in this respect they may be considered to be older than seeing lads and girls of the same age. At the same time, it is undeniable that in many ways they retain their characteristics of immaturity longer, and it would be inadvisable to push them into the rough and tumble of life before the age of 20 is reached. The freedom and responsibility, which are the prerogatives of wage-earners, postulate a degree of independence to which the blind pupil of 17 or 18 has normally failed to attain. The question is not how quickly technical skill can be acquired; that is the relevant inquiry with regard to the adult, but not for the young blind person. Four years under general educative influence and wise guidance are needed for the maturing of mind and character, so that when the days of tutelage are put behind him he will assume his new freedom with a fair prospect of success.

It, therefore, presents no anomaly that the normal course of training for adolescents is four years, though the difficulty of mastering one trade may be less than that of mastering another. To turn out a competent basket-maker is a more intricate and arduous business than to train a boot-repairer, but adolescent pupils in both industries require the full four years for the slow process of developing personality and of obtaining that experience of life which man's estate demands.

In choosing the trade for any particular pupil several factors must be borne in mind. First, due weight must be given to the pupil's own aptitudes and inclination. Second, the power of absorption by the trade or workshop or home workers' scheme must not be forgotten. Third, the home and other relevant circumstances of the future worker must also be scrutinized as directly affecting the choice. It is desirable that from the beginning of training it should be known whether the pupil will be ultimately a workshop employee or a home worker. The training will be largely the same in both cases, but the potential home worker must be given instruction and practice in salesmanship. To secure all the materials for judgment, the Training Institution will have to get into touch with the parents of the pupil, with the Local Education Authority responsible for the fees, with the Voluntary County Association for the Blind, and with the future workshop or Home Workers' Scheme, if this is conducted by some other Association.

Six-monthly reports on the pupil's progress should be kept and abbreviated forms of these sent to the appropriate Authority. Every care should be taken to ascertain at an early stage whether or not the pupil is trainable. It is impossible to give an exact time within which this assessment can be made, for some pupils who eventually turn out successfully are slow in getting under way. The Training Institution is the expert body, and it is its duty to inform the Local Education Authority whether or not the pupil's training should be persevered with. Before a pupil is turned down by an agency as untrainable, it may occasionally be possible to give him a trial at some less difficult craft. A lad who has failed at basket-work may develop sufficient skill to become a moderately competent maker of mats. Care should be taken, however, to see that alternative trials are not overdone. It is legitimate to wish to do everything possible to save the blind pupil for the ranks of the productive workers, but it is not fair to the contributing Authority nor is it in the best interests of the blind themselves that untrainable individuals should spend an indefinite series of years in one training department after another seeking fruitlessly for skill that can never be theirs. The Training Institution must furnish full particulars to the Local Education Authority, which will accept these reports as coming from the expert in the case, and will take suitable action in accordance with the recommendations received.

If, as in the normal case, the pupil survives the initial scrutiny and is deemed capable of training, the logical consequence is that the Training Institution, by accepting the pupil for the full course, commits itself to the proposition that the expenditure of time and money can be justified by his competence in eventual employment. When the training and the employing bodies are under different management, close liaison should be maintained to ensure that the training is the sort that is required for the particular needs of the employing body. Both method and substance of training should be mutually agreed. During the last six months of the training period special attention should be paid to the securing by the pupil of speed and independence.

When, as frequently happens, the pupil on becoming a journeyman has to pass to another organization, the question obtrudes itself as to who shall certify him as having reached an adequate standard in his work. There is an obvious advantage in an external opinion, and this has been secured in the case of pianoforte-tuners. In 1929 the College of Teachers of the Blind instituted a National Diploma which must be obtained before the assistance of a Home Workers' Scheme can be secured. The Diploma is bringing about a uniform standard throughout the country and has had beneficial reactions on the efficiency of the Training Institutions. To secure a similar National Diploma for blind students in industrial occupations is probably outside the bounds of practical politics, but an experiment which is at present under consideration in the London area might be deserving of application to the rest of the country on a regional basis. There are half a dozen Training Institutions in London, and the project is that these Institutions should provide a panel of examiners who would set a practical test to all pupils at the close of training. Being external to any one Institution the panel would have the advantage of impartiality, and being in close touch with the employing bodies it would know the standard demanded of an efficient journeyman. If this scheme were extended to the country as already suggested on a regional basis, it might be possible, under some co-ordinating Authority, such as the College of Teachers, to arrange for consultations among regional representatives, so that approximate uniformity of standard and method might be gradually reached and the main advantages of a national scheme attained.

Another direction in which joint action will be of material assistance to the general level of the work of the Training Institutions is the recent publication of the College of Teachers and the Association of Workshops which sets out a model syllabus in each of the recognized courses. A syllabus by itself will not do much, but it does provide a useful guide as to what should be taught and the order in which the various sections of the work should be brought before the pupil. It will also do something to encourage uniformity of method.

The institution of a Diploma for Craft Instructors by the College of Teachers in 1929 has brought about some improvement in professional qualifications, but much remains to be done. The instructor should have not only a thorough knowledge of his craft, he should be reasonably well educated and should possess the ability to impart his knowledge and his skill. It cannot be assumed that every instructor employed in training institutions for the blind to-day is fitted in these three directions. Many have held their appointments from a time when employing bodies looked for little either in the way of general culture or of teaching ability though usually the instructor was an undoubted craftsman. The beneficial effect of the College Diploma would be increased if the Board of Education, by its regulations, made recognition dependent on its attainment. It may be remembered that this was done with excellent results in the case of class teachers and their analogous Diploma. The Committee wish to place on record their strong recommendation that the Board of Education should give favourable consideration to this suggestion.

CHAPTER 2

NON-VOCATIONAL EDUCATION

(*a*) *Of persons from* 16 *to* 20

The Board of Education, by Statutory Rules and Orders, 1925, 835, para. 32(1), requires that training courses shall include " instruction in general subjects and appropriate physical training," and shall be " so conducted as to encourage a corporate life, and to afford opportunities for recreation." We are entirely in agreement with the spirit of this regulation, but we consider that it might be more explicit in some particulars.

We think that it should be laid down in the clearest possible terms that the Board of Education will not authorize centres to accept trainees under the age of 20, unless adequate provision is made for non-vocational education. Such a regulation should not apply in the case of adult trainees, and we think they should be exempted, though, as we indicate on page 173, we do not consider that even their training should be purely vocational. Their needs can, however, be adequately met by training centres which do not provide facilities for general education, but such centres should in no circumstances be allowed to take adolescent trainees.

In addition to what is attempted within the ambit of the regular curriculum, much valuable cultural work can be done through semi-recreational activities organized by the training centre, and through leisure occupations spontaneously undertaken by the pupils themselves. Though not in any way resorting to compulsion, the institution authorities should encourage pursuits of this kind, and provide the necessary facilities whenever reasonably possible. The provision of well-equipped hobby-rooms and of pianos, the organization of Rover and Ranger companies, and of literary and wireless discussion circles, the grant of leave for approved purposes, such as attending good plays, arrangements for visiting lecturers, and dramatic performances by the pupils, are among the many useful steps that can be taken in this direction. In the following paragraphs we shall be concerned primarily with the work appearing on the regular time-table, but we do not wish to lose sight of these wider bearings of the question.

Although we are very strongly of opinion that the curriculum for trainees under the age of 20 should include much that is not vocational in the narrow sense, we are not disposed to prescribe in any precise way what forms of general education should be given. Much will depend on circumstances, and we would merely indicate what general considerations should govern the selection of subjects, and the manner of their presentation. It goes without saying that the work done must not be closely allied to the vocational course that is being taken. That, however, does not imply that it should be narrowly academic. It should not bear directly on the trainee's trade, but it must be related to his or her life. If the adolescent trainee is released for a few hours a week from the routine task of becoming an efficient producer, that is mainly in order that the adult worker may be something more than a mere wage-earner. Faculties which vocational training does not cover are to be developed, so that the man or woman may be and do more than is involved in his or her paid occupation. From the predominantly manual character of most vocations of the blind, it follows that it is the things of the mind that are most likely to be missed, and the cultural part of education should therefore be biased in the direction of mental development. The quest for truth and beauty must be stimulated and guided, in order that the pursuit of manual dexterity may not reduce the worker to the level of a mere machine. This does not mean that large amounts of knowledge must be inculcated, or even that certain mental faculties must be raised by constant exercise to a high degree of efficiency. Knowledge and academic attainments are useful, but they must be combined with the will and power to act. The man or woman who is to find permanent satisfaction and recreation in the things of the mind must be a doer as well as a learner. Receptivity is not enough in itself; it must be combined with a constructive attitude. Moreover, many pursuits that are superficially manual carry with them mental activity of a high order, and it is therefore quite unjustifiable to exclude all crafts from the non-vocational syllabus. It should also be borne in mind that many forms of knowledge and skill which have no cultural value in themselves are essential to the pursuit of certain intellectual and æsthetic values, and there is no objection to including some of these in the non-vocational syllabus, provided that their end is kept rigorously in view.

As regards the planning of the course, the general object will be to build on the foundations already laid during school life, and to fill in certain of the gaps. This can most easily be done when a large proportion of the trainees come from a single school, under the same general control as the training centre, as it is then possible to formulate something approaching a co-ordinated syllabus to cover the periods both before and after the age of 16. In other cases, it remains important to consider carefully the previous educational experience of trainees, so that there may be as much continuity as possible. The continuation course will thus appear partly as a postlude to school life. But we have already emphasized the importance of regarding it also as a prelude to adult life. A forward-looking attitude is essential for both teacher and pupil; if this is not present, the pupils are very apt to regard this course as an irrelevant and unnecessary prolongation of schooldays, absorbing time which could be more profitably spent on what is to be the real business of their lives. If they are to be convinced that their lives should include much more than business in the narrow sense, everything must be done to suit their special interests and aptitudes. Therefore, even where these classes are planned in the light of earlier school work, this connection should not be made obtrusive, and it will generally be inadvisable to combine trainees in classes with pupils under 16, even though that would often have administrative advantages. Wherever a number of trainees show a desire for some particular course that is valuable in itself, everything possible should be done to satisfy their aspirations. The regular school staff cannot, of course, be expected to conduct classes in any and every subject that may happen to appeal to trainees, but it should often be possible to supplement their services from outside. If, for example, a number show a genuine desire to learn German, but there is no one on the staff capable of taking charge of a course in that language, it might be possible at comparatively small expense to secure the services of a competent outside teacher for one or two hours a week. Or again, trainees might be allowed to attend courses for seeing students outside the institution walls.

In considering the practicability and expense of such arrangements, it should be remembered that it will not necessitate a large amount of teaching. Indeed, the more independent work the pupils can do, the more benefit they are likely to derive from the course, provided that they have a certain amount of general guidance, and enough supervision to ensure that they really do the work. Reliance on outside sources, whether in the form of part-time teachers or already-existing courses, is likely to be particularly useful where the training centre is not attached to a school from which teachers can readily be borrowed.

It is hardly possible to exclude any subject as entirely unsuitable for inclusion in a continuation course. What calls for care is less the selection of the right subjects than the choice of the most suitable aspects and manner of presentation. The course should have a direct appeal to the rational or æsthetic interests of persons approaching manhood or womanhood, for unwilling attendance at continuation classes is likely to have little value for the time being, and to leave no lasting effect. Protracted routine learning should therefore be avoided, and there should be the greatest possible scope for initiative on the part of the pupil. There is no objection to the incidental acquisition of knowledge and skill by intensive work, but this should always be consciously envisaged as a means, not an end, and it should only be undertaken if it is likely to provide a new medium for self-expression, or for access to some new realm of thought or feeling. Only so will it have a direct appeal. The following paragraphs contain notes on the potentialities and dangers of particular subjects :

English literature is one of the most suitable subjects for trainees to study, as it has a fairly direct appeal, and can be closely linked with their own reading. The object should be to cultivate a living interest in great works of prose or verse, and to develop a capacity for sympathetic and intelligent criticism. A broad treatment will generally commend itself more than a minute analysis of a narrow field ; but detailed study may at times be appropriate, for instance in the case of a play which the pupils will be hearing at a theatre, or performing themselves. Incidentally it will be possible to foster original compositions in prose and verse, and the potentialities of a school magazine, and of literary competitions, should be remembered in this connection.

A foreign language may often be included in the syllabus with advantage, though it should almost certainly be a living language. The advantage of including it will be greatest where it has already been begun by the pupils at school. Otherwise there will be need for a good deal of uninteresting elementary learning, which *prima facie* is a drawback from our present standpoint. Pupils may, however, be quite ready to undertake this latter if they see a prospect of holidays abroad, or if they desire access to the wide field of international broadcasting, or for other special reasons. Where the preliminary routine work is made tolerable by some strong inclination of this kind, the teacher can seize the opportunity to lay the foundation for a valuable cultural pursuit, and a great source of interest throughout life. If he can collaborate with a course of broadcast instruction, the prospect of success will be enhanced. It will, however, not generally be wise to embark upon a course of this kind unless several pupils show decided eagerness for it ; for, if lack of time compels its abandonment, much valuable time may have been wasted. In general, a high degree of grammatical accuracy should not be insisted upon, the object being to give as quickly as possible the power to read the language intelligently, and speak it intelligibly. This done, most of what we have already said regarding the study of English literature will apply here also. The details of the course must be planned in the light of the available embossed literature, and the existence of Braille libraries abroad must not be forgotten. There are also possibilities of initiating correspondence with blind people abroad, and of taking in foreign periodicals.

In the realm of art, music is by far the most promising subject. When pupils have already acquired some skill in instrumental performing, they should be encouraged to continue it, and every possible facility should be afforded for this purpose. For reasons already indicated, it will usually be inadvisable to start instrumental instruction *ab initio*, unless a pupil has a strong inclination for it. There remains ample scope for singing and musical appreciation. In some instances, singing may be inadvisable for the younger male trainees, but others should be helped to cultivate solo singing when they have any talent for it, and there should always be a choir. Work in musical appreciation can be usefully linked with concerts, broadcast or other, and the gramophone is an indispensable aid. We need hardly point out the desirability of enabling pupils to appreciate or perform works of permanent value, rather than those of merely ephemeral interest; but the lighter side of the art should not be entirely ruled out.

Other subjects may also be used. History and geography are quite suitable if treated in a broad and rational manner, without prolonged learning of bare facts; and private reading by the pupils may add much to the value of a course in either of these subjects. Economics and psychology seem to have a strong appeal to adolescents and young adults, and the fact that they require no preliminary grounding would make them particularly suitable in cases where there is a difficulty in selecting one of the more usual school subjects for advanced study. Mathematics and science also offer opportunities, though they must be handled with considerable care, if they are to make a genuine appeal to the intelligence of the pupils.

Manual work cannot be entirely ruled out of the cultural curriculum of trainees, but it should be adopted with considerable hesitation, and organized with special care. During most of the day they are engaged in making themselves efficient workers, and it is imperative that the remainder of their time should not be spent merely in acquiring a subsidiary skill. A second trade may have advantages from the vocational standpoint, but that is entirely irrelevant to the matter in hand. If manual work is included in the non-vocational course, it must be as a means of self-expression, not of earning money. It is most to be welcomed when it is part of a wider study; wireless construction might, for instance, be taught in conjunction with a course in the underlying theory.

We think that the non-vocational curriculum for trainees should generally include a course along the lines usually known as Civics. It is obviously desirable that blind people should know something of the nature of government, central and local, and of the duties and privileges of citizenship. The teaching of history at school should do a good deal in this direction, but many of the questions involved can best be dealt with during the age period 16 to 20. A course of this kind should introduce the pupils to problems which will interest them throughout life and help some of them to play a useful part in political life. It is particularly desirable that some blind people should be active in central and local government, as their intelligent co-operation should materially help towards the wise administration of services for the blind. For this reason it would appear advisable to include in the Civics course some account of the nature and underlying principles of these special services. In any case, it is important to foster among the blind a balanced view of their relation to the rest of the community, and this implies a right attitude to the public services from which they specially benefit.

On the matter of physical training during this period, little need be added to what has been said in another chapter. Certainly no diminution in the provision of suitable activity should be allowed to occur. With boys in particular, the desire for intense muscular exertion is characteristic of this stage of development, and gymnasium apparatus work is called for. Cricket, football and other open-air games, long runs in the early morning, and swimming should find their place in the time-table. Both boys and girls can find healthful exercise and pleasure in skipping and other similar outdoor exercises, while folk-dancing will continue to be one of the best forms of training in graceful movement and easy bearing, and will, at the same time, add a recurring item of pleasure to the week's programme of work and play.

(*b*) *Of Adults*

The case of adult trainees calls for special comment. The Board of Education does not in practice require their attendance at non-vocational classes, and this custom should, in our view, be continued and incorporated in the Board's Regulations. Men and women of mature years are likely to resent anything resembling an attempt to compel them to go to school again, and unwilling attendance at classes is likely to be of little real value. Moreover, they will be anxious to complete their training as quickly as possible, in order to return to work and, if they are married, to rejoin their families. In some cases also, the objects of non-vocational courses will have already been achieved by their earlier education. We think that these considerations are conclusive against any suggestion of compulsory general education for adult trainees, but we are alive to the fact that their weight can easily be exaggerated. Speed in training is undoubtedly to be aimed at, but there is a limit to the amount of vocational work that can be profitably attempted in the course of a day. In residential centres especially, there is always much more time than can be fruitfully occupied in this way, and it is of the very first importance that the remaining hours should be used to some purpose. Recreation is, of course, very necessary, but it should be remembered that many men and women who have recently lost their sight will have difficulty in finding satisfactory forms of recreation without special help. The pastimes which they have formerly enjoyed will often no longer be practicable or at least will need to be adapted to the new circumstances. Institution authorities should take whatever steps are necessary in this connection, in order that leisure hours during training may not be a burden. They must also look to the future. A man or woman who, prior to the onset of blindness, has had ample interests and the capacity to live a full and satisfying life, may find that the loss of sight has destroyed many of the most valued pursuits. In that case there will be great need for opening up new avenues or reopening old ones, and this type of work clearly falls within the province of the training centre.

Trainees should be fitted, not merely to work efficiently at a particular trade, but also to live an effective life in spite of the catastrophe that may at first seem to have overwhelmed them. The wreck of their former lives cannot be repaired simply by giving back to them the power to earn an income.

It is hardly possible to lay down in general terms what steps institution authorities should take. Practice in this matter varies very much at present, and we appreciate that much must depend on the circumstances of each particular case, though we would emphasize that no circumstances can justify an institution in doing nothing at all. Where blindness is sufficiently complete to destroy entirely the ability to read and write, it seriously cramps a very large number of activities and entails a great deal of dependence on others. Incidentally, also, it seriously handicaps home workers in their business. It is, therefore, very desirable that even adult trainees should acquire the ability to read and write Braille. We do not suggest that all should learn it ; for some few lack the necessary sensitiveness of touch, while others may feel that it would be of little use to them. We suggest, however, that facilities for learning Braille should be available for every trainee, and that all should be encouraged to make use of them. They should be shown that this medium, troublesome as it may appear at first acquaintance, offers a way of liberation from many of the limitations which blindness has brought upon them. The same considerations apply, though with less force, to typewriting. For the rest, they should be given every opportunity to take part in such more purely cultural pursuits as we have discussed in our last section, and they may do this either by themselves or in conjunction with younger trainees. In centres whose staff consists entirely of technical instructors, Wireless Discussion Groups may offer the most convenient form of organized study, but we think that such centres should not hesitate to engage outside teachers to conduct courses.

Alternatively, special arrangements might be made for groups of trainees to attend courses organized by the Workers' Educational Association or other educational bodies.

PART V

HEALTH AND PHYSICAL EDUCATION

CHAPTER 1

THE HEALTH OF THE SCHOOL CHILD

Even with the normal child the question of health must have an important bearing on the problems associated with his general education, and we believe that in the case of the blind child, who is generally sub-normal in physique and vitality, the need for keeping the question prominently in view is even more important.

We propose to examine the subject under the following headings :

1. General maintenance of health.
2. Medical provisions.
3. Practice of hygiene.
4. Sex Education.

1. General Maintenance of Health.

(*a*) *Site and Premises.* As most of the questions involved here apply to all well-organized schools of whatever type, we do not propose to deal with them in detail, except in their specific relation to blind problems. We desire to stress that in any new building development for blind schools the modern tendency towards ample playing fields, well-equipped gymnasium, open-air classrooms, generous lighting arrangements, and effective ventilation should be kept well in mind. The importance of securing a cheerful atmosphere by tasteful decoration in the classrooms and homes is so often overlooked in schools for the blind that we desire to call special attention to it.

(*b*) *Equipment.* It is essential that every school should have a medical officer's room, capable of being converted into a dark-room for ophthalmic examinations, and that every residential school should have adequate hospital accommodation, with surgery and dispensary, together with provision for observation of suspected cases of infectious disease.

In any re-planning of blind schools, dormitories should be so arranged as to secure cross-ventilation. The balance of advantage is in favour of a maximum of twelve beds, while in the ideal school cubicles would be provided for older boys and girls. Small dormitories lend themselves to more effective supervision, and greater elasticity in utilizing the accommodation for different ages and sexes; moreover, in small dormitories a more home-like, as against an institutional atmosphere, can be developed. In the event of an epidemic, smaller dormitories provide better facilities for isolation.

(*c*) *Dietary.* The blind child, from the nature of his defect, has less opportunity to develop physical energy, and cannot engage in the activities of the normal child. Consequently he tends to be lethargic and flabby, and his diet should be adjusted to counteract these tendencies. Care should be taken to exclude a preponderance of carbohydrates, while a greater proportion of fruit, fresh vegetables, and milk is desirable.

Questions of nutrition have been authoritatively explored by the Minister of Health's Advisory Committee on Nutrition. In Circular 1243 of the 21st March 1932, the Minister circulated copies of two Reports by this Committee on (*a*) *Diets in Poor Law Children's Homes*, and (*b*) *The Criticism and Improvement of Diets.* Each Report is on sale, price 3*d.* The Circular points out that the Report at (*a*) is of interest to Poor Law Authorities, but not to them only, and we strongly recommend that it should be in the hands of the head masters and matrons of every residential school for the blind, and be studied by members of the Governing Body. Among the recommendations contained in the Report, we would draw special attention to the following :

1. The need for more varied menus.
2. Steps should be taken to secure that every child under 16 receives one pint of milk daily (though we should like to qualify this in the case of very young children, for whom a suggested diet is given in Appendix 7), a considerable proportion of which should be taken at breakfast.
3. An ample supply of vegetables should be included in the diet daily, and as regards raw fruit, two apples or oranges (preferably the latter) should be supplied weekly.
4. A greater use should be made of cheese.
5. The following foods, when cheap and readily available, should be included in the diets : Ox liver, fish roes (in winter), herrings (for older children), carrots, tomatoes, water-cress and oranges.
6. Normally a hot breakfast should be given.
7. Both breakfast and the evening meal should consist of more than the stereotyped bread and butter.

The Report includes specimen menus and recipes.

The Second Report deals with the problem of nutrition in more general terms, but can also be consulted with advantage by persons responsible for the feeding of school children.

There has been a growing appreciation of the importance of nutrition during the last few years, and of diet as a factor in nutrition. However important diet is for the seeing child, it is even more important for the blind child, because his handicap often involves the limitation of physical activity, which is itself another essential factor in securing good nutrition. We therefore would urge that more scientific attention should be paid to the question of diet in schools for the blind, and for that reason we regard the two Reports as of great value.

Clothing. Broadly speaking, the modern tendency to freedom in clothing should be followed, but owing to the lower vitality of the average blind child, caution must be exercised to see that adequate warm clothing is provided.

2. Medical Provisions

There are certain provisions in ordinary residential schools which apply fully to schools for the blind. The medical staff of a residential special school usually includes a medical officer, dentist, and fully trained nurse. In order that the authorities of the school may have no compunction in calling in the medical officers whenever necessary, these should be salaried officials. The medical officer and the dentist will only give part-time service.

Any scheme for the maintenance of health and the treatment of disease or abnormality must be founded on periodic medical inspection. The medical officer should carry out an examination of every child annually, and this examination should include nutrition, the circulatory, respiratory, digestive and nervous systems, and the special senses. Certain children suffering from defects or subnormal health will, of course, be seen at more frequent intervals. Further, the medical officer will be responsible for dealing with medical emergencies, such as accidents and epidemics, and should advise on matters relating to the general hygiene of school life.

Facilities for the treatment of minor diseases and illnesses should be available in the school itself. All such treatment should be prescribed by the medical officer, and administered by the nurse, working under him.

Arrangements with neighbouring hospitals where the services of certain specialists (aural, orthopædic, etc.) will be available, should be made for the treatment of more serious illnesses, of conditions which make surgical operation necessary.

The dentist should examine the teeth of every child every six months, and carry out any necessary treatment, facilities for which should be in the school itself.

In schools for the blind, ophthalmic examination and treatment is of special importance. The school should have on its staff an ophthalmic surgeon, who should also be a salaried official. His duty is to examine and advise on the eye condition of each child at intervals of a year, or more often if the condition is a changing one, and to prescribe any necessary treatment. The examination should include the testing of vision, where vision exists, and full inspection of the eyes by an ophthalmoscope. In the light of such examinations, the ophthalmic surgeon should advise on any modification in methods of teaching which may be desirable, and whether or not the child is likely to be eligible at the end of its elementary school period for the benefits of the Blind Persons Act. It is obvious that if the child is to receive the most suitable type of education possible under the limitations imposed by his disability, and if the deplorable error of educating a partially sighted child as a blind child is to be avoided, there must be close co-operation between the ophthalmic surgeon and the head teacher.

Full medical records of every child should be retained in the school. These should include records of routine medical inspection, ophthalmic examination and treatment, illnesses occurring during the school period, dental examination and treatment, and the means taken to deal with any special defects, such as enlarged tonsils and postural defects.

All the services enumerated above should, in a day school, be provided by the Local Education Authority.

3. PRACTICE OF HYGIENE

By far the most effective method of instilling the principles of hygiene is to embody them in the daily life of the school child. This applies with even greater force to the blind child, who, unless specifically taught, is left unaware of the unpleasant social reaction resulting from a neglect of these principles.

It should be the duty of the school nurse to supervise all matters relating to the personal hygiene of the children. Care should be taken that regular and supervised hygienic practices form an indispensable part of the period of training. The habit of taking a regular bath at least once a week should be inculcated, and practice given in improvised bathing arrangements to train the child in bodily cleanliness when full bathing facilities are not available, as is often the case under home conditions. Toothbrush drill and handkerchief drill should be a daily occurrence, and attention should be directed towards the condition of finger- and toe-nails, and to the care of the hair. An important aspect of personal hygiene is in the proper conduct of the functions of excretion. The correction of constipation and the development of regular habits is particularly necessary in the case of blind children.

Apart from aspects of purely personal hygiene there are certain matters of domestic hygiene which should form part of the training in school. Classes in domestic science play an important part in this instruction. The hygiene of dormitories should provide a valuable object lesson, the child being taught to air and make his bed, and to appreciate the proper value of adequate ventilation.

One of the limitations imposed by blindness is a difficulty in distinguishing clean linen, clothing and utensils, and it is important that everything should be done to train blind children in the appreciation of cleanliness in the materials or utensils they use.[1]

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[1] The place of the teaching of hygiene as a classroom subject has been referred to in Part III, Chapter 4, and is also extensively dealt with in the publications of the Board of Education, which seem to us to be generally applicable to the blind, as far as subject-matter is concerned.

4. Sex Education

Sex education is not something to be taken up at a particular point in the child's general development, but is rather a process of guidance and information which begins in early infancy, and continues through adolescence. Its twofold object is that of knowledge, and of a healthy attitude towards life and society as a whole. The advance of civilization depends on man's ability to canalize his instincts, and to direct their force to socially useful ends. One of the main objects of education is to achieve this aim.

Inquiry should always be healthily satisfied if morbid curiosity, distorted ideas and perverted attitudes are to be avoided. Curiosity and fear are similarly stimulated and a clumsy, timid or apologetic handling of a situation or of a question asked may lead to a neurotic condition. We are of opinion, however, that normally young children have little conscious interest in matters pertaining to sex. They may notice differences in outward physical structure, but this evinces probably nothing more than the establishment of an observation, just as the observed differences between a cat and a dog. It is quite usual for a child of 6 to ask the question, "Where do babies come from ?" The simplest answer will be found to satisfy the questioner who will be unable to understand any reference to conception or birth mechanism and will certainly not be interested in it. It appears that much of the information sought by young children has only fleeting interest and is soon forgotten if the inquiries are dealt with in a natural and unemotional manner. It is important, nevertheless, that the elementary facts relating to sex should be simply stated before puberty. A general view of the functions of the two sexes ought to have been acquired by that time, as the child is then able to approach the subject in a calmer and more scientific spirit than in adolescence. Ignorance or misconception of the significance of the phenomena at this stage of development may lead to fears, with evil consequences both mental and physical. It is difficult to discuss sex matters with children during the early years of adolescence owing to a reluctance on their part to do so. This is probably due to a protective instinct designed to steer them safely through the years of immaturity and cannot, we think, always or entirely be attributed to an inhibition acquired by a faulty handling of the sex problem by their elders.

The problem is, however, complicated by external circumstances. It is a delusion to assume that a child's mind can be kept free from thoughts of sex by the withholding of information by those best qualified to impart it. Poor housing conditions, with consequent overcrowding, may bring about precocious knowledge of sex affairs. A child's own chance observations, conversations overheard between adults and fascinating facts of doubtful validity surreptitiously imparted by playmates, are worked upon by his imagination stimulated by awakening sex urges. The information, which children pick up from one another is frequently erroneous and is dangerous when it instils fear. Such a situation can be avoided by wise and courageous handling by parent or teacher. What is frankly discussed without undue emphasis loses the attraction of secrecy and tends to sink into the commonplace.

The underlying principles relating to sex are identical for the seeing and the blind, and we have read with interest the recent Report of the Inter-departmental Committee set up by the Special Services Sub-Committee of the London County Council Education Committee on Sex Instruction in Residential Schools and Children's Homes. So valuable do their recommendations seem that we quote them here as they stand, though we realize that owing to environmental and subjective modifications imposed by lack of sight the approach of those on whom the duty of sex enlightenment falls must be modified :

> " (*a*) That sex education should be looked upon as a part of the general question of character training in the residential schools and children's homes.

" (*b*) That appropriate instruction . . . should be given to girls and boys (i) at, or immediately before, puberty, (ii) during early adolescence, and (iii) on leaving for employment. This instruction should be given to individuals or to small groups. There should be no class instruction in sex education.

" (*c*) That school courses in elementary science should include some biological teaching, and that this should form the basis upon which the sex instruction should rest.

" (*d*) That those in charge of physical education in the residential schools should seize suitable opportunities for talks on personal hygiene and the care of the body.

" (*e*) That the training of girls for domestic service should include talks on infant care and management, personal hygiene and physiology.

" (*f*) That no girl or boy should leave school for employment without a talk, either individually or in small groups, from a senior officer. The talk should be designed to help the leaver to adjust herself (himself) to adult life. That girls and boys should not be supplied with books or pamphlets on sex subjects, and that films on sex instruction should not be shown.

" (*g*) That adequate activities in the nature of games and recreations should be organized for all girls and boys. That greater freedom and increased opportunities for meeting together should be given to the girls and boys, and that these should extend to people and experience outside the school walls.

" (*h*) That officers in charge of children should be trained in the inculcation of good habits, in the proper way of answering children's questions, and in the giving of simple sex instruction.

" (*i*) That a course or courses of lectures on sex instruction for children should be arranged for the staffs of residential schools.

" (*j*) That the necessary steps should be taken to recruit the best type of persons available for posts whose occupants are closely concerned with the handling and upbringing of children, e.g. house-mothers and attendants, games masters and mistresses."

A much larger proportion of blind children are in residential schools than are seeing children. Teachers and matrons are more in contact with them than are their parents. The former, therefore, have more opportunity for guidance than the latter. Undesirable practices, particularly during early infancy, should not be corrected by scolding, punishment, or forcible prevention, but by diverting the child's attention. Faulty treatment during these early years of life may lay the foundation of subsequent problems.

Although the L.C.C. Committee recommends that there should be no class instruction, their Report shows that expert opinion differs on the subject. Many authorities disapprove of it, but we have been unable to secure sufficient convincing evidence for or against it. If class instruction is ever given, the lecturer should, in addition to a thorough knowledge of the subject, possess the ability to command the respect and confidence of the children and also be of the same sex as the pupils in the class. An atmosphere of solemnity and awe are undesirable, as a sense of normality should be preserved. We look upon such lectures, however, at best as a temporary makeshift, in the belief that the time will come when the requisite knowledge will have been obtained by children in the course of their school life. An attitude of mutual trust and respect between teacher and pupil will ensure this end, if the teacher possesses knowledge and adopts the right approach.

It is recommended that Sex Education should not be given as a "subject," but should be integrated in the ordinary process of upbringing. Obvious subjects in which it can be integrated are nature study, physiology, and hygiene. Emphasis would thus be avoided and naturalness preserved.

We appreciate the greater demand which would be made on teachers of the blind by the acceptance of our recommendations. Some teachers may be ill equipped for the task and most would not desire to undertake the responsibility. We should like to see, as an integral part of their training, a course of Sex Instruction which would enable them to meet sex situations and even crude questions with sympathetic understanding and without flinching. Meanwhile where members of the staff feel they are unable to cope with such situations, they should diplomatically refer the child to a more competent colleague.

Blindness imposes two serious barriers to the healthy mental development of the child in relation to sex. The seeing child has many opportunities of education, through observation of sex differences. Even if he has never seen the naked body of a member of the other sex, he will have many occasions to see statues and pictures which stimulate inquiry and afford a means for normal development.

We have been forced to recognize that these sources of knowledge are practically closed to the totally blind child. To the latter the tactile sense has largely to take the place of sight. Touch as the conveyor of sex knowledge is, however, liable to cause far greater psychological disturbances than sight. While statuettes and models have their value, it is easy to overestimate this.

It is, further, more difficult for the blind child to satisfy his primary needs, particularly that of variety, than it is for the seeing. Inaction and boredom lead to subjective outlets, among them self-exploration, morbid speculation (especially where knowledge has been perverted) and sex abuses. The value of hobbies and sports may readily be recognized in this connection. It is important that the child's mind should be fully occupied with matters which generally interest him ; a severe sense of drudgery is to be avoided. In addition, ample scope should be provided for interesting physical activity. We wish to emphasize the importance of sustained interest. Where the mind is insufficiently occupied with agreeable matters, it will tend to seek relief in such outlets as present themselves. These are more restricted for the blind than for the seeing, and the danger that they may lead to undesirable forms of relief proportionately greater. Where the mind is well occupied with absorbing matters, physical, æsthetic and so forth, there should be little opportunity for the appearance of sex difficulties either among young children or among the adolescent.

The social aspect of sex should be stressed as soon as the child can appreciate it. In this connection we recommend that children, just before leaving school at 16, should have the possible consequences of inter-marriage among the blind and the dangers of venereal disease explained to them during their final, private interview with the head master or mistress. We realize that the age of 16 is probably not the ideal one for this purpose, but that it should be higher. The opportunity may, however, not recur.

CHAPTER 2

PHYSICAL EDUCATION

From the earliest age sight has a great effect on physical activity. A sighted child sees an orange on a shelf and learns by itself to reach up on tiptoes, balance and grasp. The blind child could equally well reach, balance and grasp if someone would see the orange for him. Unless, therefore, special efforts are made to stimulate and direct the physical activity of blind children, there is a grave danger that they will remain inactive and that this inactivity will have serious effects on their posture, bodily health and vitality, and that their whole outlook on life may be affected. They may be deprived in this way of the joy of, and the power of expression in, movement and of the spirit of adventure.

It is significant that the Child Welfare Committee of the League of Nations at their meeting in April 1933 passed the following resolution : " Great stress should be laid upon the physical development of blind children both as part of the educational training in school and also by means of games, recreational activities and camping, which can be carried on in association with normal children under the direction of such societies as the Girl Guides, Boy Scouts and the Junior Red Cross." The White House Conference on Child Health and Protection in dealing with blind children emphasized the importance of providing something to take the place of the spontaneous and strenuous play of the seeing child.

At an early stage in our Inquiry we recognized the great importance of the physical education of the blind and we asked Miss Vulliamy, C.S.M.M.G., who is in charge of the physical training at the School for the Blind, Swiss Cottage, and Dr. Anna Broman, an orthopædic surgeon, to investigate the conditions in a number of schools and to report to us on the whole subject. We publish as an appendix to our Report:

(i) their Report,
(ii) a statement showing the percentage of postural and structural defects found in the children examined by them,
(iii) a memorandum on school and workshop furniture and equipment,

and

(iv) drawings showing defective postures of blind persons at work at desk or bench.

In addition to these Reports we have taken evidence from the Inspectors of the Board of Education and the Ministry of Health, teachers and others on the subject of physical education.

We are deeply concerned at the state of affairs which this evidence reveals. Miss Vulliamy and Dr. Broman in their Reports state

> " the blind child as we see him at the beginning of his school life is too often lacking in confidence and neuromuscular control. He frequently has bad habits, his joints are usually lax and his muscles flabby, and it is still more deplorable that he often has no joy in movement and his emotional and muscle energy find a blind alley output in finger tappings, head shakings, body rockings, etc. His muscles and joints are sometimes so weak that they are liable to give way under the prolonged weight-carrying of school life, and, unless care is taken, all those orthopædic defects associated with this condition—flat feet, weak ankles, curvature, knock knees, etc.—lie in wait for him too."

It will be seen from the Analysis of postural defects on page 310 that out of 644 children examined only 11 per cent. were classified as having satisfactory development; 79 per cent. as having postural and slight structural defects; 8 per cent. as having structural and marked postural defects, and 2 per cent. with crippling deformities.[1] Some of these physical conditions are unavoidable, but many of them could either be prevented or much reduced under a proper system of physical education. The life in many schools is too sedentary, and it is important that every kind of school work should be made as active as possible. There is a tendency to make time-tables too exacting and not to organize leisure in such a way as to encourage free movement. Miss Vulliamy and Dr. Broman told us that the physical training of some schools is producing definitely harmful results, and the following extracts from reports which they made to us with regard to specific schools are interesting in this connection.

Of one school they say:

> " The orthopædic examination revealed many cases of back defects, mainly of two types, either a scoliosis with rotation and high shoulder associated with unsuitable myope desks, or a long kyphosis with low lordosis associated with one of the chief exercises shown in the physical exercise table,
>
> > " standing, arms forwards, upwards and forwards, downwards swinging to touch ground " (see Fig. 2, page 279).

Of another school they report:

> " The blind boys had a slack stance with weak ankles

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[1] In the Annual Report of the Chief Medical Officer of the Board of Education for 1932, we read: " When we come to observe a hundred children of the age of 12 years in an average elementary school we find that about three-quarters of them reveal more or less serious defects of posture." Dr. Norwood, formerly headmaster of Harrow, published a table of orthopædic defects of entrants to Harrow School in 1931, showing a large percentage of defects associated with nervous conditions; the disabilities arising from nutritional diseases, bad hygiene, and loss of sight are absent from his list.

aggravated by an exaggerated turned-out foot position, while many of the myopes had a definite type of spinal curvature corresponding to the tiring, twisted position necessitated in the use of adapted desks."

Of a third school they say:

"The orthopædic examination revealed many cases of round back which might be associated with unsuitable and ill-fitting desks. There was also a rather large proportion of knock knees associated with a faulty idea of posture correction, the chief mistake being a tendency to produce an artificial holding of shoulders and chest rather than a firm erect stance affecting all the muscles and joints, knees included."

Of a fourth school they say:

"The most common defects observed throughout were over-arched back, lax ankle joints and cramped toes, due partly to the exaggerated military stance, with turned-out toes taught in the gymnasium, and partly to unsuitable footwear. There was also a high proportion of marked postural and structural curvature, usually associated with overwork, unsuitable school furniture and insufficient leisure. The general atmosphere of 'conscientious overstrain' was probably partly responsible for the poor muscle tone and lax joints found among some of the pupils."

Of a fifth school they say:

"Careful thought has been given to the physical education in this school, but the results are disappointing. Many of the children appear lacking in vigour and vitality, and it is evident that more expert knowledge of child growth and development is desirable. The buildings are old-fashioned and cramped for space, but the recent acquisition of a playing-field will now enable the children to enjoy more game activity."

It will be clear from these quotations that the problem of the physical education of blind children is important and difficult. A sighted child will normally have the opportunity of physical development in active and enjoyable play with his sighted friends, but, unless the natural inertia of many blind children is definitely overcome by wise physical training and by the persistent encouragement of activity and joy in movement, his physical and even his mental development will suffer severely.

Physical education is therefore a matter of peculiar importance in the training of blind children, and systematic attention to it is rewarded. Miss Vulliamy told us that after ten years' work at the school at Swiss Cottage she was able to report definite improvement in the development of the postural sense, in the growth of confidence and ease of movements, and of greater neuro-muscular control. During the same period a proportion of orthopædic defects had diminished and marked structural defects are now rare except among older entrants.

To sum up our broad conclusions on the evidence. The physical education of blind children leaves much to be desired. The schools for the blind have not as yet applied generally a system of physical education which overcomes the physical drawbacks inherent in blindness. As a consequence, too many blind children are listless, without joy in movement, showing marked postural defects and, in a number of cases, definite structural deformities. On the other hand, the results obtained in schools where the problem of physical education has been thought out and tackled are very encouraging.

Turning from this survey of the present position to recommendations for improvement in the future, we would commend to the careful study of the reader the appendices and diagrams relating to physical training. We proceed to summarize our conclusions and recommendations.

Physical education is far wider than physical training. It is concerned with the whole physical life, including sleep, diet, clothing, posture in class, exercise and games. Two important consequences follow from this :

(i) Physical training is only part of the problem of physical education. It is a highly important part because spontaneous activities of children in games are apt to cause the over-development of some parts of the body at the cost of others, and systematic physical training can correct this. Also physical training can develop the weaker children and help them to come to enjoy physical activity and be able to take part in games and other free activities.

(ii) The physical health and well-being of the children are not the exclusive province of the expert physical training teacher. It should involve the co-operation of all concerned, including the physical training teacher, the matron, the school doctor, the teachers, the head master and the orthopædic consultant. The physical training teacher will find her work much hampered unless the matron co-operates in matters like clothing and living conditions. Or again, she will find all her efforts to encourage correct posture imperilled unless the teachers watch for wrong posture in class. The head master must understand the significance of physical education and must be prepared to insist on adequate time being given to it, on the provision of suitable equipment for physical training and of types of furniture in the school which will not undo much of the work of the physical training teacher. Co-operation of the school doctor is most desirable, and he can greatly assist in the school if he has some knowledge of, and sympathy with, modern orthopædics. In view of the special needs of blind children the services of an orthopædic surgeon should be available for every school unless there is a fully qualified physical training teacher, and he should make a periodical examination of all the children.

While physical education should be the concern of the whole staff of the school, the teaching of Physical Training ought to be in expert hands. It is, however, to-day being attempted by three classes of physical training teacher, (*a*) the completely untrained, (*b*) the partly trained, and (*c*) the fully trained. Only the fully trained teacher should be allowed to give remedial exercises or be given a free hand in the use of apparatus. The partially trained teacher should not touch remedial work and should only use simple apparatus with great caution. Very serious harm may be done to the children by the misuse of apparatus. The work of the untrained teacher should be confined to the organization of games and general activity exercises.

We recommend that every school for blind children should employ, either whole time or part time, a fully trained physical training teacher, with, if possible, the diploma of the Chartered Society of Massage and Medical Gymnastics. This teacher will probably be a woman, because, until recently, girls of good education have had much better facilities for training in the theory and practice of physical training and allied subjects than men. As the Board of Education pointed out in their Physical Training Series Number 10, page 7 :

> " Physical training has proved an attractive career for girls of good education, and there are several Physical Training Colleges in England giving a three-years' course of training in the theory and practice of Swedish Gymnastics and allied subjects to educated students."

If the teacher is a woman, she will require the co-operation of a man teacher in taking boys over 14 years of age.

We recognize that the appointment of a fully qualified teacher in every school, whether day or residential, may be difficult in the immediate future, and the most satisfactory alternative is to employ a partially trained teacher. Such a teacher may have given some attention to physical training in the course of his training as a teacher, but he is not likely to have learnt enough to be able to apply first principles to the very peculiar and difficult problems of the blind. It is for this reason that we most heartily welcomed a course on the physical education of blind children which was given in July 1933 at a Summer School at Swiss

Cottage under the auspices of the College of Teachers of the Blind. A report on this Summer School has been published by the College of Teachers of the Blind.[1] We should like to see this course repeated periodically, and all partially trained teachers who are called upon to teach physical training to the blind should be urged to attend. We also think that the work of partially trained teachers could be made very much more valuable if schools employing them would arrange for periodical visits by a physical training expert who would be able to advise the teachers on modifications and developments in their teaching. Our Scottish witnesses told us that in a school for the blind in Glasgow one of the ordinary school teachers gave teaching in physical training for twenty minutes each day and was supervised by a physical training expert with special knowledge of the blind who visited the school about once a fortnight. We do not regard such frequent visits as essential, but they should take place at least once a term. In one school where the numbers are small the physical training is taught by a partially qualified teacher, but all the children are periodically examined by an orthopædic specialist and treatment is given to them when required by a blind masseur.

With regard to the kind of teaching in physical training which should be given, there has been a tendency in schools for the blind to develop along too formal lines. It should be recognized that good general posture should be the aim of all exercise work. The use of accurate, simple and fundamental movements of all parts of the body with a minimum amount of time spent on "numbering" and "formation" is required. A great variety of exercises should be introduced into the syllabus and more use of free exercises and simple apparatus should be made. It is most important that closer attention should be given to cultivating the postural sense. We know now that this is not gained by muscle development alone but also by maintaining the child's self-confidence or, if that has been lost, by creating the wish to be erect and strong. Good posture should be presented as an everyday habit and not as a parade-ground stance. Various matters must be specially considered in teaching blind children. The words of command should be clear and not too fast. It must be remembered that the blind child has not the stimulus of seeing his companions' movements, and with young children interest can be given to the exercises by the use of word-pictures and stories. On the whole blind children do not enjoy gymnastics and rhythmic trunk movements, and rhythmic movement can best be developed in them through dancing. Free standing movements are less interesting to the blind child than apparatus work and it is desirable, therefore, to use fewer movements and confine them to the more fundamental and to avoid all movements which cause stiffness, e.g. the neck rest position, hands on thighs, head back pressing, elbows circling. All the usual gymnastic apparatus can be used and enjoyed by blind children. One of its great advantages is that it encourages pluck and the spirit of adventure. Remedial work is for the expert, and our only recommendation is that it should be given wherever needed and only by an expert. It is important to consider posture and structural defect in choosing the future occupation. For example, bending at the circular knitting machine may be very bad for a girl with curvature, and flat machine knitting involving long standing for a girl with knock-knees.

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[1] The Report is obtainable from the London Society for Teaching and Training the Blind, Swiss Cottage, N.W.3, price 2*s.* 6*d.* (2*s.* 9*d.* post free).

With regard to the time to be given to physical training in the school week, we understand that the practice in the public elementary school is twenty minutes per day or one hundred minutes per week. At least as long provision should be made in the daily time-table of schools for the blind, and in addition there should be games and general activities. In one school for the blind the practice is ninety minutes per week per pupil in class, remedial exercises where necessary, two long walks per week, Guides, Rangers, playground games, football practice and folk-dancing. Remedial exercises must not be carried out too often, because they may defeat their own end by boring the child.

The Committee gave careful consideration to the possibility of drafting a syllabus of physical training for blind children. The Board of Education have now issued a revision of the Syllabus of Physical Training for Schools, Part I of which contains a most admirable introduction and discussion of the general principles of physical training in schools. The adaptation of this Syllabus or the drawing up of a different one for use in blind schools is, in our view, unnecessary, on account of our recommendation of the appointment of a physical training expert in every school.

The organization of games without appearing to organize them is a matter of great importance. Every opportunity of developing the spontaneous activity of blind children is to be welcomed, and the development of activity in strenuous games is most desirable.[1] The stimulus could be given by the organization of games clubs, and friendly games with sighted children would furnish valuable points of contact with them. Folk-dancing also can be organized to bring the children into touch with sighted children and is an admirable recreation, both from the point of view of an expression of the rhythmic sense and of affording strenuous exercise. Care must, of course, be taken to avoid the danger of overstraining blind children, and contests with other schools or school sports must be carefully watched from this point of view. In all competitive sports and games there exists the danger that the less proficient are unduly discouraged and, in consequence, may develop a dislike of exercise.

Turning to premises and equipment, each school has to make the best of its inheritance from the past. The ideal environment for physical education may be taken as set out in the following quotation :

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[1] See N.I.B. Bulletin No. 11, *Games for Blind Children*, price 6*d*.

> "It was evident that the physical education at this school was carefully considered in all its aspects, and everything seemed to combine to give the child a chance of healthy development. The school stands on a hill and is surrounded by grass meadows. It is so built that all the classrooms are open on one side to fresh air, sunlight and view. Shower-baths are provided by the Local Authority as are also additional milk and excellent meals. Advantage is also taken of the town facilities, such as swimming baths."

We are strongly of opinion that no residential school for the blind should in future be established without ample provision for playing-fields. If the need for this is clear in the case of residential schools for sighted children, the case is far stronger for blind children.

We gather from the report of our investigators that in some schools there is obsolete and unsatisfactory apparatus and equipment. In the planning of a gymnasium or equipment schools for the blind should consult the *Memorandum on the Planning, Construction, and Equipment of Gymnasia in all types of Schools and Educational Institutions* (Physical Training Series, No. 14), issued by the Board of Education in 1934.

On the question of school and workshop furniture and equipment we would draw special attention to the memorandum and drawings in the Appendix. Undoubtedly, very serious harm can be and is daily being done to blind children and adolescents by the use of unsuitable and ill-fitting furniture in the school and workshop. The correct sitting posture is for a pupil to be able to sit far back and, without raising the shoulders or rounding the back, to place the elbows on the table, while the feet rest on the floor or a foot-rest. In order to secure this position there should, as a matter of school routine, be a yearly desk fitting to every child, and wherever possible chairs should be used instead of fixed seats.

We have learnt with concern that in some cases, notably those where the training establishment is attached to a workshop rather than to an educational institution, physical training of the adolescent may cease abruptly when he leaves school at the age of 16 and that no physical training is given to adolescents under training from the ages of 16 to 21. We are aware that there are honourable exceptions to this, but we are satisfied that the statement is generally true. This cause may be either lack of space or a preoccupation with vocational training which excludes the consideration of any other matters. We have dealt with this in another part of our Report, and we regard it as a matter of the first importance that adequate physical training should be given to all blind persons under 21 who are undergoing training. As an example of what can be done in this matter, we quote a case which was brought to our notice by our Scottish witnesses, Dr. Simpson and Colonel Forbes. One of the teachers of academic subjects for the adolescent blind trainees in Glasgow noted that the boys slouched, and application was made to the Local Education Authority to arrange for a male instructor to give an afternoon class to twenty boys. The experiment has been a great success and has greatly improved the deportment of the boys. No such instruction has been given to the girls although they probably need it quite as much.

It is, of course, of great importance that proper physical records should be kept of all children, and that these records should be available to all the teachers concerned with the children.

It must not be forgotten that children return home during the holidays and that some of the good done by the physical education in the school may then be lost and the children become listless and bored by the lack of activity. Our attention was drawn to a circular issued by the Royal Institution for the Blind, Birmingham, telling parents what to do with their blind children during the holidays, explaining that the first essential is exercise, and to this end urging the parents to get reliable children to take the blind child for walks or games. Scout or Guide troops, Young People's Societies or Sunday Schools should be approached before the child comes home. Every effort should be made to provide the child with suitable companionship and entertainment. We have no doubt that this practice is followed in other schools and we think that it should be adopted in all. The home teacher in the area of the child's home should visit during the holidays in order to see that the child has opportunities for exercise, companionship, books to read, and materials for pastime handicrafts.

To sum up, while physical education is of great importance for all children, it is of peculiar importance in the case of blind children, and therefore demands the most careful planning and painstaking execution. We have suggested methods by which physical education can be improved. We conclude with a quotation from Mr. M. L. Jacks :

> " I think we can hazard a guess that when the Day of Judgment comes and the spiritual values of our cultural activities are added up, those who have concerned themselves with the liberal education of the body will be found not far from the top of the list."

PART VI
MISCELLANEOUS

CHAPTER 1

Co-Education

Educational theorists and practising teachers are at present much divided on the question whether boys and girls should be educated together, or separately. This controversy is active in connection with the education of the blind, and we therefore feel that it calls for discussion in our Report. In considering it, we have found many cogent arguments on both sides, and we have not been able to reach a unanimous conclusion on the general question. Indeed, we doubt whether there *is* a single clear-cut issue upon which a simple judgment could be pronounced. We therefore propose to set out the main arguments on the general question, adding the special considerations which are relevant to the education of the blind.

Before proceeding, it may be well to point out that many of the schools for the blind which mingle boys and girls do so merely for administrative convenience, and not from a belief in the general value of co-education. Where it is thought necessary to establish, or continue, a school to serve a limited area with a small number of blind children, the policy of keeping the sexes apart would sometimes make the schools unworkably small, and in less extreme cases would either entail very heavy expenditure on staffing, or create classes with an undesirably wide age-spread. Such conditions, however, clearly do not remove the need for an examination of the wider issues involved.

It should be borne in mind that in practice the sexes are mingled in very varying degrees. At one extreme are schools which only bring girls and boys together for certain classes, where they are under close supervision. At the other extreme is what is regarded as true co-education by the convinced exponents of that policy, where most classes are mixed, where boys and girls mingle freely in their social activities, and where the discipline of both sexes may be in the hands of either. So far as we are aware, no blind school fully carries out this latter programme. Short of that, however, there are all degrees of sex mingling, as well as complete separation. It will be observed that some of the comments which follow apply only to the more thorough-going forms of co-education, whereas others relate to any sort of mingling of the sexes. Moreover, the distinction between boarding and day schools is important in this connection, but we shall not repeatedly draw attention to it where there seems no likelihood of misunderstanding.

The advocates of co-education urge that their system follows naturally from the fundamental principle that education should be a preparation for life in the broadest possible sense. Life for the vast majority of people is lived in a world of two sexes, and it is difficult to see how they can be completely prepared for it in an environment where only one sex is present. Adults, whether men or women, share the same political institutions, accept identical scientific truths, cherish substantially similar moral and æsthetic values, and frequently earn their livelihood and enjoy their recreations in close co-operation. It is therefore held that collaboration between the sexes should begin early, and grow in the favourable environment which a good school can provide. If it is urged that their attitudes on many of these things differ, it may be replied that co-operation between them must eventually be secured, and this is likely to be made more difficult by segregation during the formative period. The latter must tend to foster narrowness and lack of comprehension of the point of view of the other sex, whereas close intercourse should encourage a broad outlook and mutual understanding.

This consideration is particularly important in connection with the personal relationships between the sexes. Such relationships lie at the root of the family, one of the most essential elements in the life which most will wish to live, and it is obvious that segregated education can make little contribution to the eventual realization of a rich and harmonious family life. It is, in fact, responsible for much pseudo-romanticism among adolescents, which, in its turn, is a fruitful cause of unfortunate marriages, as well as of less serious evils. It is true that some romantic attachments are always likely to be formed between the older boys and girls in co-educational schools, but these are probably neither more frequent nor more serious than occur among adolescents attending other types of school. On the whole, it seems that close contact between the sexes in school makes for healthy and intelligent relations between them. The evils of segregation are most marked in boarding schools, as it is much more complete there. Although co-education places additional responsibilities on the authorities of such schools, there is the countervailing advantage that any romantic attachments which are formed will be more apparent than in the case of day schools, and it should be easier to combat their more serious consequences.

There is thus a strong case for co-education on general grounds. We are not impressed by the adverse argument from experience, as the system has not so far been fully tested in England, while segregation is clearly a result, not of educational expediency, but of various circumstances and ideas of past days which are no longer relevant. But a number of cogent objections to co-education emerge when it is sought to translate general educational principles into the more concrete form of institutions, subjects, and methods. These will be examined in the following paragraphs.

Against co-education it is contended that the life of a school containing only boys or only girls can reach a level of much greater intensity and organic unity than that of a school which combines both sexes. As the members are more homogeneous, it is possible to develop a more positive and inclusive school tradition, with more corporate life. In such an environment the separate identity of the individual is to some extent lost, and his character is powerfully influenced. A co-educational school which attempts to realize such a degree of unity must tend to break down the distinction between the sexes, a result which few would favour. Consequently, those who attach importance to a strong corporate school spirit criticize co-education as making for individualism, and weakening the formative influence of the school. Closely connected with this is the objection that it makes more difficult a really satisfactory relationship between teacher and taught. It is claimed that most boys and girls have the more profound respect for teachers of their own sex, and that segregation, coupled with corresponding arrangements as to staff, helps towards the most complete understanding between teacher and pupil. Those who stress the importance of the influence of teachers upon the character and interests of their pupils will therefore feel that co-education weakens one of the essential educational forces. It also makes discipline more difficult, and this weighs heavily with those who do not believe in great freedom at school. This is an important consideration even where much self-government is allowed, owing to the difficulty of giving prefects of one sex authority over the other sex. This last problem, however, does not arise unless co-education is carried to its extreme length. Even if corporal punishment and other forms of coercion are not relied upon, there remains the fact that the type of appeal which will gain the co-operation of a boy is not that which should be addressed to a girl; so that a teacher who is trying to secure the smooth working of a mixed class must use dual tactics.

Certain complications arise in connection with the curriculum, as a mixed school must construct a time-table to suit the needs of both sexes simultaneously. Arrangements will, of course, be made for boys and girls to receive separate instruction in some subjects, such as carpentry and cookery. It may further be urged that, even in the case of subjects which both sexes will take, some differentiation in respect of amount or mode of treatment is called for. It should, however, be remembered that the classes in blind schools are small, so that much individual attention can be given, and also that the average blind child will be mainly concerned with the more elementary stages of school subjects which both boys and girls should study.

As regards out-of-school activities, including general living arrangements in boarding schools, co-education imposes additional responsibilities on school authorities and, where there is the alternative of a segregated school containing the same number of children, it entails additional expense in several directions. If the advantages of co-education are to be secured, a good deal of intermingling between the sexes must be allowed and encouraged. Most school societies will be mixed; there will be combined dances and concerts; and, in boarding schools, meals will be taken by both sexes together. All this necessitates vigilance on the part of the staff to detect the growth of undesirable friendships, and, when they arise, they must be combated carefully but unobtrusively. On the other hand, some organizations, such as Scouts and Guides, require segregation; and games must for the most part be separate. Opportunity must also be provided for each sex to engage in other pursuits peculiar to itself which are desirable on general grounds. A co-educational school which prevented boys from forming a scientific club merely because girls would not participate would clearly be making a fetish of a good principle. Indeed, teachers must at times encourage separation; for a boy who mixes with girls all the time, and shares all their activities, is likely to become too effeminate. It will be seen that co-education presents various problems to the staff of a school which practises it, requiring constant vigilance, nice discrimination, and great tact.

There is one reason which, in the view of many, turns the balance definitely against co-education in the case of blind children. This is the danger of inter-marriage among blind persons. We ourselves think that the extent to which this is fostered by mixed schools is often greatly exaggerated. Attachments are much more likely to be formed at a later period, between blind men and women working at the same industrial institution or meeting in social activities, and we do not think that this matter has much connection with co-education, though it is of some importance when trainees of both sexes are brought together.

The objections to marriages between two blind persons are too obvious to need more than cursory mention here. Such unions, which are largely due to the fact that the blind community is now so largely a class apart, tend to increase that isolation, and we deprecate this on general grounds. Where the wife is totally blind, both parties are likely to suffer a good deal of inconvenience, unless they can afford to engage some domestic help. Unless they are prepared to remain childless, there will in some cases be a danger of transmitting eye defects, and there is always the probability that the children will lack some of the attention they need. In some cases, too, the blind man or woman could receive valuable help in his or her business from a seeing wife or husband. On the other hand, it should be remembered that many of those educated in schools for the blind possess an amount of sight which is very useful in carrying out household and family duties. Moreover, we know that totally blind girls are already in some cases being trained to be housewives of no mean ability, and we would urge all schools to do their utmost in this direction. The question of heredity is, we believe, still in a comparatively early stage of investigation,[1] and in any case it seems to bear on the question of the marriage of blind persons in general rather than on that of inter-marriage. The question of help in business does not arise in the case where inter-marriage is most likely, namely, among workshop employees; but it may be vital in some of those instances in which inter-marriage is due to co-education or social intercourse. This whole problem must be viewed in the light of the fact that a blind man or woman—particularly the latter—may not easily find a congenial seeing partner. We hope that, with improved social training and lessened segregation, this difficulty will be reduced; but it is not likely to disappear altogether, and is certainly of some significance at present. A blind man or woman is thus at times confronted with the choice between remaining single, marrying a seeing person who is not entirely suitable owing to age or education or other reasons, or marrying a blind person with whom a really intimate union is possible. In such a case we are not sure that the last choice would be wrong. Therefore, while we are strongly of the opinion that all mixed schools, as well as others, should take care that their pupils fully realize the implications of inter-marriage, we should regard as quite unwarrantable any attempt to put pressure on former pupils who contemplate inter-marriage or who have carried it out. It cannot be too clearly realized that the best safeguard is not the negative one of restraint, but the positive policy of making more satisfactory marriages possible.

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[1] See Report on Hereditary Blindness (Prevention of Blindness Committee, 66 Victoria Street, London, S.W.1).

CHAPTER 2

SOME PROBLEMS OF LATER SCHOOL LIFE

In the closing stages of school life, special attention should be given to the task of fitting blind children for easy and effective intercourse with the seeing. The school will already have accomplished much in this direction, by speech training, cultivating good manners, correcting mannerisms and the like. In other respects, however, the tendency will have been in the opposite direction ; for, the longer the child remains in a segregated institution mixing chiefly with companions handicapped like himself, the less capable he becomes of meeting the peculiar difficulties that arise in dealing with those not similarly circumstanced. In his own circumscribed society he may be an active and well-adjusted member, and yet be quite unfit for the wider area that is ahead of him. To cultivate social relations solely from the standpoint of institutional life is clearly short-sighted, and must lead to shocks and failures when that life ends. This matter is evidently most urgent in residential schools, but it remains important even when segregation is limited to school hours. Nor would the need be met by abolishing segregation. The blind child in a school for the seeing faces the problem from the first and all the time, and that is to some extent a gain ; but it does not necessarily enable him to solve the problem. This being so, it follows that, though residential schools which foster intercourse between their children and the outside world are taking a most important step in the right direction, they are only partly meeting the case, especially as the more vital contacts of such children will still for the most part be inside the institution walls. Deliberate action by the staff seems indispensable, and, to make it effective, they must help the children to gain some understanding of the nature of the difficulty. This does not, of course, mean that an hour should be explicitly allocated to it in the time-table. The wise teacher will have it constantly in mind, and will find many opportunities of dealing with it unobtrusively.

This is not the place for an exhaustive analysis of the handicap which blindness imposes in social relations. Indeed, owing to the large part played by individual characteristics, there is some room for doubt as to its precise nature. Nevertheless, it will be well to indicate briefly the sort of considerations the teacher must have in mind if he is to fit his pupils for the transition to seeing society. Blind children naturally come to realize that they cannot think and feel about all the things which interest their sighted fellows. The teacher need not labour that point, and indeed must take care that his pupils devote their energies mainly to things of which they can have real experience, as distinct from mere verbal knowledge. But some types of verbal knowledge are useful, for instance, in helping a blind person to keep in touch with a conversation which has turned on subjects that are, strictly speaking, beyond his reach. If he has no such knowledge, his sighted interlocutor may be completely baffled, and may entirely misjudge his intelligence. With its aid, contact can generally be maintained until the conversation reverts to more suitable topics. A blind man who had never heard of Van Dyck, or who did not realize that certain combinations of colours are incongruous, would be handicapped in social intercourse. Verbal knowledge that is likely to be useful in this way must not be ignored, and some of it may have to be deliberately given. Again, the growing child will gradually come to realize that he looks at many things in a way peculiar to himself and his school-fellows. He discovers this when in contact with seeing people, by noticing that their ideas on various matters differ more or less sharply from his own. Such enlightenment by experience is invaluable, and will continue to some extent all through life. For the adult, however, the sudden discovery that his conceptions on some quite elementary matter are abnormal may be extremely disconcerting, and it is desirable that, before they leave school, blind children should be deliberately made aware of such discrepancies whenever there is reason to believe that they may not discover them for themselves.

Considerable difficulty often arises in the early stages of a conversation between a blind and seeing person who are strangers to each other. This will generally be less if the blind person clearly realizes that most seeing people have little experience of the blind, and are therefore very liable to misconceive their capacities and needs, that they are perplexed by the abnormalities which even the best-trained blind people can hardly hope to avoid entirely, and by the fact that, if they follow the normal custom in conversation of taking for granted what is at the moment visible, a blind person is baffled, and unable to converse satisfactorily. Moreover, it is very common to open a discussion with some remarks about immaterial trifles, and there is reason to believe that blind people are often poorly equipped in respect of the customary conversational stock-in-trade, this being only partly due to the fact that much of this small-talk centres on things that are visible. Before entering the world at large, it is important that the blind man should have some realization of this type of difficulty, and should appreciate that, if he wishes to get effective and friendly contact with seeing people, he will generally have to exert himself in order to put them at their ease, and find common ground.

Social intercourse that is really worth while must include much more than conversation, and it is most desirable that blind people should be enabled to enter into joint activities with the seeing. This is more difficult, but that only makes it more urgent that schools should do all in their power to prepare the way. Many of the social activities of school life can be continued subsequently—debating, concerted music, co-operative study, certain indoor games, camping, scouting, rowing, swimming, and dancing are probably the main examples. Participation with seeing people will, however, generally require more or less drastic changes of form, and it will be well, if, before leaving school, blind adolescents are shown how necessary modifications can be made, as they may otherwise be afraid to try to continue these activities. Pupils desirous of continuing intellectual pursuits in collaboration with others should know of the opportunities offered by wireless discussion groups, and other forms of adult education, while those keen on scouting should receive some guidance as to how best they can enter into the work of a seeing group. Again, the school which gives its children the desire and ability to take an active part in the life of their homes is laying an indispensable foundation for their later life. In addition, those leaving school should be encouraged to take up other forms of social activity, whether political, religious, or social in the more restricted sense. Something may be done to equip them for such enterprises, if only by explaining their nature. Above all, marriage will open the way to the most important part of the social life of many blind people, and although it is not the province of the school to give explicit guidance or training in this connection, the skilful teacher can do much to prepare the way for an effective family life.

In all this we do not wish to imply that blind people should not associate with each other. Most evidently prefer to do so for some purposes, and we do not in the least deprecate this. Most schools have organizations for their old pupils, and will encourage other social and sports clubs for the blind. What is to be avoided is complete isolation, or anything approaching thereto. A purely blind community must be undesirably narrow in outlook, and unnecessarily restricted in action, and the rest of society is likely to adopt wrong attitudes and policies if it is not in close touch with the blind. We therefore consider that relations between blind and seeing persons should be as normal and intimate as may be, and to this end every possible bridge should be built across the gaps that separate them.

In addition to social activities, a full and satisfying life must include many private pursuits and interests, and the school has an essential part to play in preparing the way for these latter. Reading is probably the most important, especially as it is an element in many of the others. Music will rank second in many cases. Almost every subject in the curriculum may form the basis for further study. The literature class, in conjunction with the school magazine, will foster in some children a talent for composition in prose and verse, which can be cultivated afterwards. The handwork lesson, the domestic science class, the hobby room, and the school garden should develop skills and interests leading on to hobbies that will often, incidentally, be useful in a material sense. Most of these things will have a place throughout the whole of school life ; but it is the special duty of the teacher of the adolescent to look constantly to the future, adding just those touches which will be fruitful then, even though they may be of little value in the present. He may even go the length of mildly discouraging activities that must perforce end with the schooldays, in order to encourage the first beginnings of some that should play an important part subsequently.

During adolescence, the question of a future career becomes urgent. Generally the decision on this must, after consultation with the parents and the pupil, be taken by the school staff, so the gravity of their responsibility is obvious. In any case, the school will powerfully influence the outcome. Quite apart from the fact that the nature of the curriculum will go far to decide what kinds of work are practicable, and what are not, it must be remembered that the ambitions and expectations of the children will be profoundly affected, by their school life. The school must therefore seek to foster an intelligent and healthy outlook on this question.

By the time they have reached the period of adolescence, most boys and girls begin to consider seriously what prospects of a livelihood the future has to offer. School authorities will naturally stress the importance of obtaining economic security. Our problem, however, is peculiar in one most vital respect, owing to the existence of large institutions which offer the trained blind man or woman a reasonably regular and certain income, under conditions which to a large extent shelter them from economic competition. The "sheltered workshops" exist to provide blind persons who cannot earn a living outside them with an occupation and livelihood on a self-respecting and self-supporting basis. The self-support is to some extent illusory, because the workers' economic earnings are supplemented by "augmentation," that is, by an amount which is supposed to compensate the handicap of blindness. We have no quarrel with the sheltered workshop system in so far as it fulfils the purpose indicated above, but we strongly deprecate the tendency to present such workshops to blind children as the inevitable channel of employment open to them. It would be lamentable if a large number of our young people came to view the problem of their future careers mainly in terms of the best method of qualifying for an income only partly earned in any sense known to economists, but it is undeniable that this danger is inherent in the British system of provision for the blind. If it is not combated, it cannot fail to have most undesirable effects upon character, as well as entailing a heavy, and probably increasing, financial burden on the rest of the community. It is therefore of paramount importance to foster a desire for real economic independence, which implies greater service to the community, and must bring a greater measure of self-respect. It may be objected that to encourage ambitions of this kind is useless, and likely to cause unhappiness in those cases (which, unfortunately, in present circumstances will be numerous) where the goal cannot be reached. But it should be possible to avoid this result, if the question of the handicap of blindness is properly handled. If the boy or girl is taught to regard complete independence as the ideal to be aimed at, but is also shown that lack of sight makes it unusually difficult of attainment, some degree of failure need entail no morbid sense of defeat.

We therefore consider that the boy or girl who desires to carve out a career beyond the bounds of our sheltered workshops and home workers' schemes, should not be regarded as a troublesome rebel against the natural course of events, but that, on the contrary, schools should try to foster healthy ambitions of this kind. If so, they must also do what they can to guide them along promising avenues. In the depth of a trade depression, when even those with all their faculties have extreme difficulty in finding employment in the competitive market, this may appear a hopeless task. It is, however, from another point of view, difficult to attempt even in times of general prosperity. Workshops and home workers' schemes are at present so overwhelmingly the main solution to the vocational problem that it is difficult for the teacher or pupil or parent to give enough serious consideration to possible alternatives. This is especially true where a workshop exists in close conjunction with a school. In addition, there is a tendency for Local Education Authorities and County Associations for the Blind to discourage training on other than orthodox lines. It is clearly not the duty of school authorities to spend large amounts of time and money in searching unpromising fields for possible vacancies, but equally it is not for them to assume or encourage the assumption that openings in the world at large do not exist. If they take care that the question is not prejudged without proper consideration, it is probable that not a few opportunities for placement will present themselves in times of reasonably good trade.

In dwelling upon this matter, we are far from wishing to cast doubt on the permanent utility of subsidized employment for the blind. So far as can be seen at present, it will remain indispensable for a large proportion of blind persons. It is, however, essentially a support for those who cannot stand alone, and should not be uncritically prescribed for any who do not need it. Above all, it should not be allowed to kill the desire for independence, or to block the open road against those who are fit to venture upon it. Those in charge of the adolescent can, more than anyone else, help to keep these various considerations in their proper perspective, and ensure that blind men and women enter upon their life's work with a healthy outlook upon its opportunities and difficulties.

It cannot be too strongly emphasized that the school which equips its pupils with the capacity and desire to live a full and active life, including both social and private activities, is doing a work of absolute value. Some of the purely academic instruction may have little direct application when schooldays are over, and there is no certainty that opportunities of utilizing the vocational skill of the pupils will be provided so as to secure economic independence. Yet a good life may be fashioned in almost any circumstances, however unfavourable. To fit its pupils to achieve this is one of the paramount functions of a school, and, in this task, those in charge of the adolescent have the greatest opportunities and obligations.

CHAPTER 3

THE BLIND CHILD IN SCHOOLS FOR THE SEEING

The general policy with regard to the education of "exceptional" children in this country has produced the Special Schools for the blind, deaf, partially sighted, partially deaf, physically defective, and mentally defective. These schools are nearly always self-contained units under their own head teachers, and, with few exceptions, they have no connection with any individual public elementary school. They may, or may not, be residential. They are administered under different grant regulations from those governing ordinary schools, and as a condition of grant must be certified as Special Schools.

Though there is still a barrier between the Special School and the ordinary school, there has in recent years been a tendency to make the organization of the ordinary school more elastic, so that certain types of exceptional children may be educated within the ordinary school system. In many of the ordinary schools, classes are formed for dull and backward children which often admit higher-grade mentally defective children who would be eligible for a Special School; several of the public elementary schools have special open-air classes for delicate children, who in other areas might be sent to a certified Open Air School; and one of the foremost recommendations of the Committee of Inquiry into the Problems of Partially Sighted Children was that the education of such children should be conducted where possible in classes attached to, and forming an integral part of, the ordinary school. We have now to consider how far this policy of providing for the education of exceptional children side by side with normal children is applicable in the case of the blind.

The theory that the blind child should be educated with the seeing had its advocate in Scotland as long ago as 1875, when Dr. Barnhill, of the Glasgow Mission to the Outdoor Blind, published *A New Era in the Education of Blind Children*, a book wholly devoted to the alleged benefits of such education, and it is interesting to note that the present practice in Glasgow, as described by one of our Scottish witnesses, is for blind children to attend one of three centres in schools for the sighted.

The education of the blind side by side with the seeing has won favour chiefly, however, in America, and there are to-day more than twenty cities in the United States which have " Braille Classes " in public schools (which correspond to our Council Schools) with more than 400 pupils in attendance. Certain members of our Committee who visited Cleveland, Ohio, during the World Conference on the Welfare of the Blind held in New York in 1931, saw the work of the Braille classes in the public schools there, and drew up a Report, which we summarize below :

> " The population of Cleveland is approximately 900,000, and the enrolment in the public schools approximately 147,000. There are three Braille classes with a total accommodation of 36 (approximately 1 per 4,000 of the ordinary school population). Two classes are formed in elementary schools, the first taking children of 6–8, the second children of 8–12 ; the third class is formed in a Junior High School for children of 12–15 ; from this class successful pupils go to an ordinary class in a Senior High School where ' readers ' are provided for them. These readers may be sighted individuals specially engaged, or, more often, are sighted pupils following the same course as the blind student. In certain cities special Braille classes are formed also in the Senior High Schools. The Braille class visited was at the Waring Public School, which had 10 blind pupils on a roll of 803 children. These 10 pupils were of ages 9–12. The

work done in the Braille class, which is under a special teacher, includes reading, arithmetic, and handwork. The children attend the sighted classes for lessons in literature, history, geography, elementary science, and mental arithmetic, spending about half their time with these classes. An essential to the success of the system is that much of the teaching in the special class is supplementary and explanatory to that given in the sighted classes. The child's written work is prepared by him in Braille until he has learnt the use of the typewriter, interpreted by the special teacher's interlining, and then corrected by the regular grade teacher. Special gymnasium work is given to the Braille class, though the children join the swimming classes with the sighted children. Considerable attention is given to eurhythmics. The curriculum includes two lessons in piano and music each week, given by a visiting teacher. Younger blind children, of whom there are 8, are in a Braille class at another school, two miles away. From the Intermediate Class at Waring Public School, pupils are drafted to a Braille class in the Edison Junior High School, which takes children from 12–14, and in which the general educational arrangements are similar to those already described. These children spend rather more time with sighted children. From this class successful pupils go to the ordinary class in a High School, readers being employed to supplement the class work."

Before discussing the advantages claimed for the American system, it should be stated that there are certain serious administrative problems that would have to be faced if the education of blind children in schools for the seeing were attempted in this country. The two main difficulties are the small proportion of blind to seeing children, and the present-day tendency to organize the Public Elementary Schools on the principles of the Hadow Report. The same difficulties were encountered by the Committee on Partially Sighted Children, when they framed the recommendation that where possible partially sighted children should be educated in special classes in the ordinary schools, but in the case of the blind the difficulties are increased fourfold ; for there is only one blind child to approximately 3,500 sighted children, whereas the proportion of partially sighted to sighted children is one to 1,000. Areas with a school population of 30,000 to 40,000 would have approximately 10 blind children, and, therefore, assuming that a class consists of about 10 children, only a sufficient number to form one class. To find a Public Elementary School suitable for such a class would be impossible if the Hadow scheme of reorganization had been adopted, for under this scheme the Public Elementary Schools would be divided into Junior Schools for children up to the age of 11, and Senior Schools for those of 11 plus, while the Senior Schools might be further subdivided into Boys' Schools and Girls' Schools. For areas, therefore, with an insufficient number of blind children to form at least two special classes, the education of the blind in schools for the sighted would be, save in the most exceptional circumstances, impracticable.

The same is true of County areas, even though they contain more than 40,000 children on the Elementary School Registers, but for a different reason. The children are scattered over a wide area, and facilities for transport are not so ready as in towns. Even if there were a sufficient number of blind children for two or more classes the practical difficulties, and the objections to conveying the children from all parts of the county to one of these classes, are too great to make the scheme workable.

The scheme of educating blind children in schools for the sighted could therefore only be practicable in urban areas where there was a sufficient number of children to form two or more classes, and where these classes could be fitted in with the type of general educational organization of the areas. Such areas (having over 50,000 children on the Public Elementary School Registers) are seven in number ; they are London, Manchester, Liverpool, Birmingham, Leeds, Sheffield, and Bristol. In how many of these such factors as transport facilities and the type of Council School organization would make the scheme practicable, is a matter that could only be determined by local investigation.

If, however, the education of the blind with the sighted were intrinsically desirable, an effort to overcome administrative difficulties would have to be made. What, then, are the educational advantages claimed for the system ? They may be summed up under two heads :

1. The advantage of the blind child remaining in his home environment.
2. The social and educational advantages of the blind child being brought into contact with fully sighted children in the ordinary Elementary Schools.

The first argument is essentially one in favour of the Day School over the Residential School, and is relevant to the question under consideration only to the extent to which blind children now sent to Residential Schools could go to Day Schools, i.e. Public Elementary Schools. It is, moreover, an argument which can be used by both sides. The advantages of a satisfactory home environment are obvious, as they provide elevating and stimulating factors in a child's life. On the other hand, bad home conditions, due to poverty and neglect, or over-indulgence and ignorance, will have an even greater effect on the young blind child than on the young sighted child, since the former is largely cut off from the interests, impressions, and socializing forces outside the immediate environment of the home.

With regard to the second argument, the Committee fully appreciates the view that there are certain broad social advantages attaching to the system of educating blind children in ordinary Elementary Schools. We are agreed that the socializing force and normality of the ordinary school would be a great benefit to blind children, but in our view this benefit would be offset by certain serious objections.

One of our educationists urged in another connection that the interests of the blind would be better served by a fuller inquiry into, and stronger development of, the positive qualities they possess, than by making their education a colourable imitation of the education of members of the sighted world. In the education of the blind in schools for the seeing there would be an even greater danger than now exists in schools for the blind of this " colourable imitation " of the education of the sighted being imposed upon the blind. The curriculum of the Public Elementary School must necessarily be framed to meet the needs of the sighted majority, and although the " Braille Class " would maintain a certain amount of independence, the educational ideals of the school, as a whole, would almost inevitably be imposed upon the blind children in that class. This would be particularly unfortunate in the case of young blind children, the most important features in whose education should be sense and habit training, training in confidence and in independence of movement, eradication of blind mannerisms, and training in the reception of the countless non-visual impressions from the outside world which are a substitute for the visual stimuli of the child endowed with sight. A sighted child has acquired training in these essentials through the less formal education of home and of social intercourse, and by the habit of " using his eyes." This last most important channel of reception is closed to the blind child. Consequently the training in these fundamentals of knowledge and behaviour must occupy a large part of the time given to the education of young blind children. The Committee recognizes that an important function of the Braille Class teacher in America is to provide the specialized education necessary for blind children, but they fear that in a class formed in the Public Elementary School there would be a great danger of the essentials mentioned above being missed owing to the imposition on the blind children of the more formal education suitable for the sighted.

Again, the isolation of Braille reading and writing as "subjects" to be taught apart is criticized as involving an artificial separation, whereas they should be bound up with the teaching of history, geography, and all the other subject-matter of instruction. Further, it is alleged that the lessons given in the ordinary elementary classroom will not be suitable for blind children, as the teacher cannot always be adapting her language and methods to meet the needs of three or four blind children in a class of thirty.

In this country, where the majority of the blind enter certain special trades or vocations, education during the last two years of school life should be co-ordinated with the course of vocational training which the blind pupil will enter at the age of 16. During these years, there should be a general training in craftsmanship designed to prepare the blind child for the more specific training which will be given after he leaves the Elementary School. The Public Elementary Schools have generally but few facilities for the practice of those handicrafts which experience has shown are the most suitable for giving the blind child muscular co-ordination and manual dexterity. The Committee on the Education of the Partially Sighted realizing the vital importance of such children being educated for the sighted world they must enter on leaving school, recommended that where possible they should be educated in special classes in the ordinary schools. The blind child cannot, as a rule, hope to enter the sighted world in an economic sense, and therefore the problem of his education is in this respect fundamentally different from that confronting the Committee on partially sighted children.

Our witnesses were not in agreement with the claim that competition with other children is likely to stimulate blind children to greater endeavour, or to engender the feeling of equality of the blind child with his sighted fellows. They are of opinion that the sense of being different from the sighted will be accentuated, and that he is likely therefore to develop an "inferiority complex." It should be remembered, however, that it is easy to be misled by a popular catchword. When the feeling of inferiority exists already, free intercourse with the seeing is likely to aggravate it, but not all blind children have this sense, at any rate not to a morbid degree. The sense of difference from one's fellows does not, in a healthy environment, necessarily beget a pathological inferiority complex.

The strength of the position of those who advocate the education of the blind child side by side with the seeing is emphasized by the danger of "segregation" and "institutionalism." Though many teachers to-day are alive to these dangers, we feel that much more might be done in our schools to overcome the inevitable disadvantages of segregation. School life should be made as free and as individual as possible. Opportunities should be given for out-of-school intercourse with sighted children. There should be a closer link between the child's parents and the school, and the child should be allowed to see something of the world about him, to visit places of interest, shops, concerts, and other entertainments. Contacts with the outside world should be encouraged, and children should take part in such activities as Boy Scouts and Girl Guides.

While we hope, then, that the blind child will develop as normally as possible in intellectual and social relationships, and while we appreciate the influence which the ordinary Elementary School might have towards reaching this ideal, we think that the advantages of the system of educating blind children in ordinary schools are outweighed by the disadvantages. We are of opinion that the education of blind children, particularly of young blind children, is of too specialized a character to permit of its being treated as an appendage to the scheme of education in the ordinary elementary school. In forming this conclusion, however, it should be understood that the Committee has in mind the blind child of average attainments. The conclusion must not be construed as definitely closing against the gifted blind child all other avenues than the present type of school for the blind. Different considerations arise with the child suitable for secondary and University education. These matters are discussed in Chapter 5 of this Section (p. 236).

CHAPTER 4

THE EXCEPTIONAL CHILD

(a) *The Retarded Blind Child*

In an earlier chapter we have discussed the meaning and the measurement of educational and general retardation, and we have said that as a rule children who belong to the class known as the dull or less retarded should remain in the ordinary schools for the blind. We have spoken also of the need for further research into the means of discriminating between the various grades of mental defect and into the location of the borderline of mental capacity between children who shall or shall not be educated in ordinary schools. But whatever may be the outcome of these researches and inquiries it is not to be expected that administrative action will succeed in removing from the ordinary school all children who have difficulty in maintaining a normal rate of progress in school subjects, and we must indicate briefly the principles upon which teachers should attempt to deal with these slower pupils. From the point of view of teaching method the most important consideration is that the education of a dull child must be founded upon his positive individual interests. Even the dullest child has some interests; these must be discovered, fostered and broadened, and step by step brought into relationship with the normal activities of the school. At all costs the dull child must get the habit of succeeding at some task and must be made conscious of a sense of improvement; the habit of failing at uncongenial work is a fatal bar to educational progress.

Apart from this the difficulty of dealing with retarded children in an ordinary school is mainly one of classification. They cannot profitably share the same lessons with children of their own age, and yet the presence of an older boy or girl in a class for young children is rightly regarded as objectionable. This difficulty is most acute when a child of 10, 12 or even 14 comes to school for the first time and in attainments is below the average child of 7 or 8. To place such children in the class appropriate to their attainments inevitably stamps them with a mark of inferiority and may lead to difficulties of discipline which react most unfavourably on the younger children.

We can lay down no rules for classification which are applicable to every school, and we are content to describe methods which have in various circumstances been effective. The one clear principle is that if a child can share with children of his own age lessons in any subject or occupation whatever he should be allowed to do so. In handicrafts, physical exercises and games, speech-training and dramatic work, in music, listening to talks and discussions and all those activities which form the basis of social training, the retarded child should be in the company of his fellows of the same age, though not necessarily and invariably employed in exactly the same tasks. When separation of retarded children for specific lessons is advisable they may be brought together into a special class under a teacher who has shown a genuine aptitude for dealing with individual difficulties. In such a class they will probably be mainly concerned with the learning of the primary subjects, but an exclusive regimen of the three R's is most inadvisable. Their gifts in these subjects are slight, and a little progress should be counted for righteousness and receive the commendation it deserves.

Reading and writing and arithmetic, beyond the small amount needed for everyday life, will play little part in their later years and, though encouraged, should not be overstressed. Only at the later stages of school life, and then with, perhaps, but a minority of the pupils, would it be profitable to attempt to teach Braille. There is, undoubtedly, a great waste of educational effort in the ordinary schools in attempting to teach Braille to children of low mentality. As for children who through late entrance to school or special disabilities are temporarily retarded in particular subjects, to relegate them to a special class may be unwise; but it may be possible to send them to a specially gifted teacher for individual tuition during a certain part of their school time, as one sends a child to a medical clinic for treatment of individual ailments; this can be done without causing to the child any loss of self-respect. Apart from these devices we must look forward to an improvement of class-teaching technique that enables the teacher to deal with sections of children of widely different ability within the limits of the same classroom; too close an adherence to the tradition of a common task for all the children in a class bears heavily upon the dull and the bright alike, and modern educational practice shows a widespread realization of the advantages of relaxing the methods of a generation or so ago.

But not only within the walls of the classroom is there coming a greater sense of the advantages of elasticity. Organization is now much freer; for some purposes such as wireless talks, musical appreciation, lectures, dramatic performances, celebrations of outstanding events or anniversaries, the varied activities of school clubs, societies, "houses" and "guilds," classes of older and younger children are combined and spontaneously formed groups of children assemble animated by like interests and indifferent towards inequalities of age or capacity. All these offer to the dull child a chance of taking a share in the corporate life of the school and of finding among his fellows a place that he can fill with a measure of self-gratification and self-respect and even with the approval of his companions.

The chief hope of ensuring the essential happiness of the retarded child lies not so much in technical improvements of method or equipment as in fostering a communal life in which the child can exercise his own talents, however meagre and of whatever kind, in an atmosphere of appreciation and sympathetic encouragement.

(b) *The Talented Blind Child*

In the chapters on the education of children between the ages of 9 and 14 and between 14 and 16, we had in mind the needs of the blind child who, while possessing fairly good intelligence, is not endowed with gifts of a superior nature. Such a child in the ordinary school would naturally gravitate to the ranks of a manual worker. The talented blind child does exist, and what to do with him is often a perplexing and disquieting problem. There is no great difficulty in educating such a child. The academic successes gained in recent years by blind students at Universities in Great Britain are conclusive proof that high distinction is possible.[1] In the profession of music the results as tested by the Royal College of Organists, the Royal Academy of Music and the Royal College of Music, are remarkably good. In other branches of work where a good general education is essential, the results have also been notable; and in commercial work, which includes typewriting and shorthand, the results again as tested by the examinations of the Royal Society of Arts and the London Chamber of Commerce have been entirely satisfactory. Several schools for the blind now present their best pupils for the School Certificate Examination.

All this amply demonstrates that within certain limits the talented blind child can hold his own with sighted children in the field of higher education. We have said within certain limits, for it must be admitted that some studies are naturally more suitable than others and make a greater appeal to the blind student. English, History, Languages, Mental and Moral Philosophy, Economics and Psychology, granted that books or reading are accessible, present no insuperable difficulty. Mathematics, Geography and scientific studies are admittedly more difficult, though it must be borne in mind that there have been eminent blind mathematicians and scientists. Nicholas Saunderson, the friend and co-worker of Newton, was blind from infancy; and François Huber, who, in the words of Maeterlinck, was "the master and classic of contemporary apiarian science," lost his sight in early youth.

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[1] See *Blind University Graduates*, N.I.B. Bulletin, No. 9. Price 6*d*.

The necessity for books is no longer the barrier it was in past days. The Libraries provide very adequately, and the printing houses are constantly adding to existing supplies. It is not difficult nowadays to find persons who are willing to give a little of their time in reading to blind students.

The means for carrying the gifted blind child into the more advanced realms of knowledge are at hand, but what gives the teacher pause is the insistent question what economic return can be expected from such higher studies. There is admittedly great difficulty in securing employment for the blind students in the professions. How far should this be allowed to prejudice the giving of extended education? No answer to this question can be made without involving considerations that stretch far beyond problems of schooling. The right of the individual to the fullest education for which his intellect is fitted is an ideal towards which our education system may be said to be aiming, though as yet from a remote distance. Schools for blind children have advantages over those for normal pupils in that the small class makes individual attention practicable and opens the door to an effective treatment of both the talented and the backward child.

The careers which a well-educated blind person can follow are very few. They may be divided into two groups: those that have hopeful prospects and those that are less hopeful.

The more hopeful are:

(1) *Music*, which has always been looked upon as one

of the most suitable professions open to the blind, may still —though at present circumstances are somewhat discouraging—with energy and guidance, be regarded as a possible means of livelihood.

(2) *Commercial Life.* Posts are not easily obtained, but a considerable number of blind persons find employment at typing, shorthand and telephone operating, and some hold good business posts.

(3) *Massage.* The possession of the School Certificate or an equivalent certificate is now demanded from all those who enter upon a course of training. The majority of trained masseurs and masseuses build up private practices, but some also hold hospital appointments.

(4) *Piano-Tuning.* The standard of education is here not so much the relevant factor as good manners and a pleasing address. The greatest care should be exercised in selecting for this occupation pupils who possess all the requisite factors for success. A good ear and skilful hands are by no means the only attributes to be considered. The advent of mechanized music in wireless and the gramophone has made a serious reduction in the number of tunings to be obtained, while the trade depression of the last few years has still further reduced the amount of work available. Another serious limitation has been brought about by the marked change in the domestic life of the community. No longer is the possession of a piano considered the hall-mark of respectability nor, in these days, are all the daughters of the house, irrespective of their innate musical talent, condemned to instrumental strumming. In spite of these discouraging features there is still room for the blind piano-tuner, and it is significant that in most Home Workers' Schemes the average earnings of the tuners are higher than those in any other occupation.

(5) *Broadcasting.* It is gratifying to note the employment by the British Broadcasting Corporation of blind artists of proved merit, and the names of blind vocalists,

instrumentalists and entertainers have repeatedly appeared in the weekly programmes. Also some talks have been given by blind persons. We believe that broadcasting is peculiarly suitable to blind persons who are sufficiently accomplished, and we venture to express the hope that increasing work for them may be found in this sphere.

The less hopeful are :

(1) *The Church.* It is only very exceptional men, mentally and spiritually gifted, with a strong sense of vocation, who should dare to seek ordination. The difficulties to be surmounted are great, and it has to be remembered that some religious bodies have a rule that the blind are debarred from service in the ministry.

(2) *The Law.* Though there are well-known instances of distinguished blind solicitors and barristers, it must be borne in mind that unless there are special circumstances it would be hazardous to encourage young men or women to take up the study of the law with a view to a career.

(3) *Teaching :*

(*a*) *School Teaching.* It is with regret that we have to include this among the less hopeful careers. At present the prospects are not encouraging. In spite of the success of many blind teachers, some of whom are entitled to the term eminent, and in spite of frequent recommendations that the staffs of every school for the blind should include a proportion of blind teachers, School Authorities do look askance at making such appointments. It must be remembered that as the number of changes among the class teachers in schools for blind children do not amount to more than twelve to fifteen in the year, and that as, for most of these posts, seeing teachers are required, it necessarily follows that even with goodwill on the part of employing bodies the number of vacancies which can be filled by blind teachers is small and is likely to become less owing to the steady decrease in the number of blind children. Of these vacancies, too, the great majority are given to blind teachers who have originally been pupils in the same school. For this reason it is almost impossible for a blind teacher to hope to secure an appointment in the open market.

Another field into which perhaps more effort might be put is the securing of posts in ordinary schools and colleges for the specialist blind teacher. It is difficult to see why a blind boy or girl who has graduated from an ordinary Training College, and has made himself master of English or History or Modern Languages, should not be a valuable addition to the staff of such an establishment. The common objection that a blind teacher would fail in the maintenance of class order should by no means be accepted as indisputable. The well-trained teacher with the requisite personality, whether he is blind or sighted, will experience no insuperable difficulty in this direction, while the good feeling and sense of honour, even in a class of young boys, are factors that may well be taken into account. When all is said, however, it would be well that all blind persons proposing to enter upon this career should be made thoroughly acquainted with the facts and not led to expect that they will readily obtain posts.

We have been informed that in some schools for seeing children, blind teachers are engaged for instruction in musical subjects, such as singing and pianoforte playing, and also that some blind pianists are engaged by Folk Dancing Societies to accompany the dances. We think that these are avenues of employment that might be further explored.

(*b*) *Tutors.* From quite early times there have been instances of blind men acting very successfully as tutors in colleges, but no one could encourage a young man to set out in life with this prospect in view. It can only be the more fortunate and the most highly gifted who can obtain such coveted posts.

(*c*) *Private Coaching.* There is no reason why properly qualified blind persons should not do well at private coaching, except that the market is already crowded and pupils are not easily obtainable.

(*d*) *Home Teaching.*

Although home teaching to-day only offers a career to a strictly limited number of blind persons, owing to the fact that home teachers, especially in rural districts, are frequently required to be able to drive a car, local authorities in many areas do employ blind teachers, especially those able to get about without a guide.

The personal attributes of a home teacher must not be overlooked. In addition to his professional qualifications, he should have intelligence, common sense, cheerfulness, good health, and a sympathetic interest in the needs of his charges. Most local authorities require the home teachers in their employment to pass the Home Teachers' Examination of the College of Teachers of the Blind within two years of the date of their appointment.

There are, of course, other careers which individual blind people have followed from time to time. The brother of Fielding, the novelist, blind almost from birth, was known as a successful "Thief-taker." Probably he sat in judgment as a magistrate—it is known that he succeeded his brother in this office. One blind man was a builder of bridges, another was a sculptor, while a third was an exceptionally successful designer of racing yachts. These are isolated cases and can afford no grounds for supposing that other blind men can be trained to follow in their steps. All the same the possibilities of discovering new careers for highly educated blind persons should be carefully explored, and those who have the enterprise and courage to embark on new ventures should be encouraged and assisted.

In our next chapter we discuss in fuller detail the facilities that exist for the further education of the talented child, and the considerations to be borne in mind in the selection of children for education in other than elementary schools.

CHAPTER 5

SELECTION FOR SECONDARY AND UNIVERSITY EDUCATION

Before an attempt is made to deal with the question of selection for secondary education some consideration should be given to the question how best to provide for the education of the intelligent child who is nevertheless below secondary school standard.

The existing school system has to be considered in the light of the far-reaching changes now being made in elementary education along the lines of the Hadow Report. The principle involved is a division into two phases, the primary phase ending at the age of 11 plus, and the post-primary branching into two or more parts, and catering for the different capacities and interests of the children in the school.

Owing to the comparatively small number of children in schools for the blind, and to the wide areas from which they may be drawn, it is difficult to see how the Hadow scheme can be adopted in the education of the blind, although the theory upon which it is based is applicable equally to the blind and to the seeing. At the same time, schools for the blind have one advantage over those for seeing children in that the classes are smaller. It has therefore been suggested that this advantage might well be increased to compensate, as it were, for the fact that the benefits of reorganization on Hadow lines are never likely to be realized. If this suggestion were adopted, and the maximum number in a class reduced, it would be more possible than it is at present to sectionalize the schools, and separate the duller children from the more intelligent.

The problem of selection for secondary education is, in its main issue, one upon which agreement is far more easily secured than the question of selection for University education; for with the statement that there is a strong and irrefutable case for the provision of secondary education for blind boys and girls capable of profiting thereby, few would be found to cavil. Practical details as to such provision, exactly how the selection should be made, and the future of those selected, are matters that offer many difficulties, but the principle is not controverted.

Section 70 of the Education Act, 1921, requires the local authority for higher education to " take such steps as seem to them desirable, after consultation with the Board of Education, to supply or aid the supply of higher education." Under Section 71 of the Act, it is further stated that the power of the local education authority to supply or aid the supply of higher education includes " the power to provide or assist in providing scholarships (which term includes allowances for the maintenance) for, and to pay or assist in paying the fees of, students at schools or colleges or hostels within or without that area." These powers have been utilized in varying degrees by the authorities concerned.

The Act prescribes no machinery for the ascertainment of blind children suitable for secondary education, nor has the Board of Education given any guidance on the subject. As a result, practice varies considerably, but, speaking generally, it falls to the elementary school teacher to recommend suitable pupils for secondary education to the Local Education Authority, either directly, or through the school inspector. The teacher judges suitability in the first instance by the usual educational means, but he may hesitate to recommend a pupil possessed of good scholastic attainments, for one of the following reasons:

1. Uncertainty whether adequate grants can be obtained to carry the candidate through the proposed course of study.

2. Lack of knowledge of the openings available for young blind persons with secondary education.
3. Obstacles to professional advancement latent in the candidate's social environment, on the completion of higher education.

It follows, therefore, that a child who may be perfectly suitable on educational grounds may not be put forward for secondary education. There is in practice, therefore, a discrimination against the blind child as compared with the child with sight. The latter goes forward to higher education, according to the scale on which provision is made for such education in his locality, in the fairly confident and reasonable expectation of finding at its close a better opening than the boy or girl who leaves school at 14. But for the blind child this reasonable expectation does not exist, and the question of employment at the end of secondary education is often a primary factor in the advice given, or the decision made.

As we accept the principle that every blind child capable of benefiting thereby should be offered the opportunity of secondary education, the three factors that influence the teacher in his hesitation to recommend a candidate who is educationally suitable need some further examination:

1. *Uncertainty as to Grants.* Even when a blind child has been accepted by a local education authority for secondary education, the authority never meets the full cost of training and maintenance, and these must therefore be supplemented by scholarships, or by grants from charitable funds. Although there is no absolute assurance on the point, charitable funds are generally found up to the necessary amount for secondary education, and the teacher who has a pupil of real promise should not be deterred from recommending him for secondary education merely by fears that the necessary fees will not be forthcoming.

2. *Lack of Knowledge of Openings Available.* The problem of selecting blind children for higher education is intimately bound up with the whole theory of blind welfare, which

regards the employment of the blind as a good in itself, apart from its economic value, and the unemployed blind person who is employable as a reproach to the working of that system. Consequently, the education of the blind is often looked upon rather as a means to the end of employment than as an end in itself. There is thus a tendency to criticize the giving of higher education to any but the highly exceptional blind child because it is feared that such education may unfit him for a life of manual occupation.

Whether this fear is justifiable must be examined in detail later. Here it may suffice to say that the fact that the teacher cannot look far enough ahead to see what the future holds for a blind child who is of age for secondary education is not a strong enough argument in itself; for we live in a world of extreme uncertainty, and it is impossible to forecast the future a few years hence. Risks have to be taken, and it is unfair to the blind child to play exclusively for safety at a time when the future of both blind and seeing is problematic.

It must be remembered, however, that the teacher does not stand alone in selection, and it is not surprising that the parent hesitates to take risks. He may refuse the opportunity of secondary education for his blind child, choosing to let him remain at an elementary school until he is of age to be transferred to manual training, rather than let him be educated for a profession that would expose him to the uncertainties of unequal competition with seeing colleagues. It is the fear of this uncertainty which often induces poor parents to prefer a safe, though modest, livelihood for their blind child as a manual worker. It is likely that at least some of those destined for manual occupations are psychologically unfitted for them, and, consequently, in danger of suffering from a sense of frustration. A wider range of occupations inside the workshop, giving greater opportunity for the satisfaction of the child's natural aptitudes, would, to some extent, counteract this danger, but the full remedy can only be found by opening up to blind children a wide field of occupations outside workshops for the blind.

For most blind children the sequence of school, vocational training, and workshop employment must be followed. The fact that workshop trades are few necessarily restricts the blind child's prospects and outlook, and those responsible for his education and eventual employment must do all they can to minimize the dangers of such restriction.

While seizing and making every opening for employment for the blind outside the sheltered workshop, it must be recognized that such employment may in the future be increasingly difficult to obtain, in view of the trend of economic and political thinking towards removing from industry workers lacking full physical competence, on the supposition that the amount of occupation is fixed and should be concentrated on the fittest of the population. Such a tendency has to be resisted in the interests of the blind ; in any case emphasis must be laid on their right to enter professions and occupations (such as massage and piano-tuning) in the performance of which their competence is fully proved.

It may be, too, that there are other professions and occupations in which blindness is not a handicap, and there is scope for further research into the potentialities of the blind. It is known that blindness is generally a handicap, but it is not known in which economic pursuits that handicap does not operate, or does not operate to a serious extent, or whether it may, by special appliances or adaptations, be overcome. Loss of sight appears to most people to be such an overwhelming calamity that it is difficult for them to realize the large potentialities still remaining to the sufferer. This circumstance acts as a subconscious prejudice against the employment of blind persons, and greatly increases the blind man's disadvantage in the competitive struggle to gain a livelihood. It was suggested by one witness (a blind University lecturer) that it would be easier for blind men and women following the higher professions to gain employment if, by a substantial increase in their numbers, the general public became familiarized with their existence as competent members of particular professions.

3. *Candidate's Social Background.* The objection that there may be obstacles to a candidate's professional advancement latent in his social environment is probably no stronger in the case of the blind than of the seeing; and if this risk were never taken, very few blind children would receive anything but elementary education. There are in fact many notable instances of blind children drawn from poor homes who, thanks to higher education, have secured positions of economic independence.

The teacher's task of selection is admittedly a difficult one, and all that can be urged is that he shall be alert to recommend for secondary education every child who shows promise of benefiting thereby, and that such recommendation shall be made as early as possible, and preferably not later than at the age of 11 plus.

Considerable stress has been laid from time to time on the problem presented by the blind child who, having been given secondary education, may be finally obliged, owing to circumstances, ~~to~~ follow a manual occupation. This, it has been contended, may cause unhappiness by its disappointment of the hopes of a better situation in life fostered by higher education, and it is further urged by some that the refined and comfortable conditions enjoyed during many years' residence at a secondary school may put a pupil out of harmony with the poor, and possibly even squalid, surroundings from which he may have sprung and to which he may be compelled to return.

In reply to this, it may be urged that even if higher education does not necessarily ensure for the recipient a better livelihood, other benefits accrue. His intellectual and artistic attainments may enable him to follow avenues of enjoyment otherwise closed to him, he may have more scope for occupying his leisure to advantage to himself and others, and he should tend generally to become a more useful and a happier citizen. The disadvantage of incongruous or uncongenial home surroundings may be mitigated by social clubs, wireless discussion groups, and the like. Nor, indeed, should it be regarded as inevitable that there must be this dissatisfaction, if scholars are from the first impressed with the dignity of all forms of work and never encouraged to think of manual work as inferior or degrading. If dissatisfaction exists at all (and it is possible that it cannot altogether be avoided in the case of certain temperaments) it should spring not from the work itself but from the rather uncongenial "atmosphere" of a workshop to one who has for some years enjoyed the companionship and general amenities of a residential secondary school.

The evidence that we have been able to secure shows that of the pupils at secondary schools, the majority have obtained employment, and some of them hold good positions in life. The information is not, however, sufficient to enable us to make any sound comparison of the successes obtained with those of sighted pupils in secondary schools, though two witnesses of wide experience have been able to report on the general position in reassuring terms. One has stated that in his view few, if any, blind persons who have received higher education have been obliged to enter a workshop, though some are engaged in such occupations as canvassing, collecting, or Braille copying. The other witness stated that while it was true that some of those who had been pupils at Worcester College were engaged in occupations other than those for which they had special training, nearly all former pupils were in employment, in spite of the fact that the country is at the present time going through a period of depression.

Worcester College and Chorleywood College have been criticized with some severity in certain quarters on the ground that their outlook on life is not sufficiently realist, and that their pupils, if they cannot obtain professional openings, are unwilling to engage in any form of manual occupation, or are, indeed, unfitted for such an occupation. If Worcester College and Chorleywood are to retain the confidence of the education authorities they must constantly bear in mind that their function is to give secondary education with a clear understanding that their pupils, in order to play their part in life and make their contribution to the economic life of the country, may have to work with their hands. Recognition of this fact would safeguard the schools and their pupils from the dangers of impracticality, and would at the same time strengthen the disposition of the school authorities to improve the present arrangements for finding employment of a non-manual character, and for giving the education of the schools the necessary bias towards vocational training. We do not suggest that the prejudice against manual occupations is in any way peculiar to Worcester College or Chorleywood College. It is to be found very often in other secondary schools, and in large classes of society outside schools. What we desire to emphasize is that this prejudice cannot be indulged in schools for the blind without creating serious doubts in the minds of education authorities and others responsible for the expenditure of public funds, as to the advisability of giving secondary education at all to blind children who cannot be maintained thereafter by their families or by private means of their own.

It has been suggested that it might be desirable for Worcester College and Chorleywood College to confine themselves to the acceptance of children whose gifts make them reasonably certain of entering a profession, and those whose parents are sufficiently well off for the child to be in no urgent need of preparing to earn his own livelihood. The suggestion is based upon the assumption that the very fact that the two schools in question are secondary schools, and so apart from, and in their view superior to, elementary schools, must result in teachers and pupils regarding manual occupations as at least less desirable than those of a black-coated type.

The Royal Normal College for the Blind is in a somewhat different position from Worcester College and Chorleywood College in that its purpose is definitely vocational. Its difficulty lies in the fact that the vocations for which it trains are limited in number, and it would be unreasonable to expect that all children who go to the school will inevitably find a place in one of them, that is, as teachers, musicians, piano-tuners, or shorthand-typists. A realist outlook on the future is therefore needed there also. But the fact that the primary purpose of the Royal Normal College is not confined to purely academic training does, in the view of one of the witnesses who gave evidence, preserve it from the danger of an anti-manual bias.

One further suggestion made in the course of the Committee's deliberations has been that the work now done by Worcester College and Chorleywood College might still be accomplished if arrangements were made for the boy or girl who showed such promise as to be likely eventually to be suitable for University education, to be sent to a secondary school for seeing children. It is true that this has been successfully attempted in America, but the experiment is one that has very rarely been made in this country, and it is therefore impossible to know how far it is practicable. One obvious objection lies in the extreme difficulty of providing a full range of the educational books required by a number of secondary schools.

Although we have endeavoured to show that to our minds there is a strong case for advocating the expenditure of public funds to provide secondary education for blind boys and girls capable of profiting thereby, without too much anxious speculation as to their future, we must recognize that the case for such expenditure is much weaker when we pass on to consider University education.

If a blind boy or girl proves his or her capacity to compete on equal terms with those who have sight, by winning an open scholarship at a University, the justice of securing the necessary grants for a University course needs no argument. We may, however, go further, for it would be unfair to expect a blind boy or girl necessarily to reach this standard before being considered for University education, even apart from the fact that the schools for the blind are not adequately staffed to give the special coaching required. One of our witnesses suggested that probably only a small percentage of those seeing boys who win county scholarships are of open scholarship standard, and rigidly to insist on open scholarship standard for the blind student would be to weight the scales too heavily against him.

Having said this, however, we must reluctantly admit that except in the case of children who win open scholarships, a case for support at the University can only be made good if the boy or girl concerned has definite prospects of finding an opening in professional life at the end of the University career. If what we have said as to the need of a realist outlook on the future is true at the beginning of the secondary school stage, it is more than ever so in contemplating a University career.

If blind boys or girls with ability above the average, but no professional prospects, have to make their way in the world, they can hardly postpone the beginning of their training in a manual occupation later than the age of 17 or 18. If, on the other hand, they are to go to the University with a view to finding a means of livelihood on their intellectual qualities, those who have to decide on the expenditure of public funds for this purpose have to ask whether they are :

1. *Prima facie* suitable for a named profession in which they would have reasonable prospects of making a living.
2. Likely to possess in mature life the right kind of personality and character.

For success in professional life, the blind must possess personal qualities of a high order. The mannerisms which easily beset blind children may become serious disabilities in adult life, and schools which prepare such children for professional work have a primary responsibility to prevent or eradicate such disadvantages.

We have to recognize also that life in some ways makes peculiarly high demands on a blind person's courage. Blind men who have been successful in professional life are in general those who possess a good appearance and bearing, with good health and physique. It goes without saying that they have the social qualities indispensable in all walks of professional life, and some measure of force and originality of thought, and of those other qualities which distinguish a man of mark. If there is one quality which they possess in peculiar degree more than their seeing fellows in the ranks of their profession, it is the courage and determination which express themselves as cheerfulness in the face of discouragements, and persistence against the difficulties which they inevitably meet.

Figures have been collected by the Committee of blind men and women who have taken University degrees in the past fifty years, together with details of their further careers. These figures show that in by far the greater number of cases University careers have been succeeded by professional life as solicitors, clergymen, teachers, etc. The details collected suggest that mistakes in the past on the part of those who advised blind men and women to proceed to a University have been relatively few, and perhaps justify the warning of one of our witnesses as to the danger of an over-cautious attitude which might result in the rejection of candidates who, given their opportunity, would have proved successful. It has to be remembered that those who have proved thus successful in professional life have been for ever removed from the ranks of those dependent upon public funds, in a way that is impossible for the worker in a sheltered workshop who, whatever his industry and skill, is seldom likely to earn an economic wage.

CHAPTER 6

PROVISION OF BRAILLE TEXT-BOOKS FOR SCHOOLS

In Great Britain, books are printed in Braille for use in schools by the National Institute for the Blind, and the Royal School for the Blind, Edinburgh. They are published at the publisher's risk in a manner analogous to that in which letterpress books are normally published, but with the important commercial distinction that the books are sold at a price which represents only a fraction of the cost of production. The difference between price and cost is made good to the extent of approximately one-third by a subsidy from public funds, and to another third from charitable funds.

It is, of course, impossible to put into Braille more than a selection of the books published in letterpress for school use, and there must, therefore, be some disappointment in the minds of teachers who favour the use of some particular text-book which is not in general demand in schools for the blind. There does not appear, however, to be any complaint from schools for the blind in general of a shortage of school books. On the other hand, the publishers find the demand for books disappointingly small, and are inclined, therefore, to regard their present process of publication as too highly speculative.

In the matter of precise adjustment of supply to demand the British method of publication compares unfavourably with that followed in the United States of America, where the speculative element in the publication of Braille school books has been entirely eliminated. Books required by

American schools are printed by the American Printing House for the Blind, the management of which is vested by law in a Board of Trustees which includes the Superintendents of all the public institutions for the education of the blind in the United States. The publication of text-books and supplementary reading matter and the manufacture of apparatus to be used in schools for the blind are the main business of the Printing House. Books are selected by a Publication Committee, which considers recommendations for publication put forward by the Superintendents of the schools and solicits orders in advance when the choice of books has been made. The size of each edition is limited by the orders received. In this way the publication of school books becomes not a speculative publishing enterprise but the fulfilment of orders received from the schools.

It is to be noted also that each school for the blind in the United States receives its proportion of the Government's annual purchase of $75,000 worth of books, music and apparatus, the proportion being based upon the ratio of its enrolment to the enrolment of all the schools for the blind in the United States.[1] As there are approximately 6,000 children in American schools for the blind, it appears that each school obtains annually books, music and apparatus to the value of approximately £2 10*s.* per child.

The " value of the British market " to the publishers of school text-books in Braille is, obviously, governed to a large extent by the amount of money put at the disposal of schools for the purchase of books. In one large area the grant for books, paper and other school supplies amounts to 7*s.* per annum per pupil, an amount which compares most unfavourably with that available in American schools, even when allowance is made for the less than cost price at which books are sold to British schools.

The present position is far from satisfactory. We have to consider whether that is so because the schools have not enough money to buy the books they require; or because the books published by the National Institute and the Edinburgh School are not the books required by the schools; or because the schools do not feel any need for purchasing a fresh supply of Braille books year by year.

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[1] See booklet, *American Printing House for the Blind—History, Purpose, Policy, etc.* 1931.

The first of these possible explanations can only be examined after some answer has been given to the other two. We are informed that the National Institute for the Blind has done everything possible to adjust the supply to the demand. The following statement has been contributed by a member of the Committee with special knowledge of the arrangements made by the National Institute. It sets out in detail the Institute's policy:

"In 1915 a Conference of educationists was held at the National Institute for the Blind to discuss the provision of educational books. Representatives of a large number of schools were present, and the Conference appointed a Sub-Committee to consider how the wishes of the schools could best be met. From that time onwards the Institute's Publications Committee was open at all times to receive suggestions from teachers on books required to be put into Braille. But although many of the requests were complied with the demand remained poor.

"In 1932 the Institute's Publications Committee, stimulated by the reports of the American method of publication made by the British delegates to the World Conference on Work for the Blind, held in New York in 1931, appointed a sub-committee to consider 'whether educational books should in future be printed to the order of schools and of local education authorities.' Information was laid before the Committee on:

1. The sales of educational books in the previous five years.
2. The sales to individual schools during the previous 18 months.
3. The orders given by certain local authorities for

books suggested by its representatives and published by the National Institute for the Blind with the assurance of later purchase.

4. The educational books on hand and those accepted for publication but not yet issued.

"This meeting resulted in the formation of a Consultative Committee to advise the Publications Committee on the choice of educational books. The Consultative Committee was composed of three active members of the teaching profession, appointed by the College of Teachers, together with representatives of Worcester College for the Blind, Chorleywood College, and the Royal Normal College. The Committee met for the first time in May 1933, and the recommendations made by it then and at later meetings have been accepted by the Institute's Publications Committee. In December 1933 a circular letter was sent to schools and training departments in England, Wales, Scotland and Ireland, and to schools in other parts of the British Empire and in certain foreign countries, giving a list of the books approved for publication, and asking that an indication might be sent of the number of copies of each work which would probably be purchased by the Institutions concerned.

"In view of the fact that the books in question were books which had been recommended by the Consultative Committee of teachers, the response to this circular has to be considered disappointing, and it is evident that some explanation other than any question of unsuitability of the books selected has to be sought."

It has been represented to us by a teacher of the blind that the use of text-books by blind children is limited; that blind children depend much more than seeing children on oral instruction, and that as Braille is always a laborious medium, a considerable proportion of blind children never become proficient at it. It has also been represented to us that Braille books are durable, and that their bulkiness discourages the purchase of more than the absolute minimum required. Such facts, however, as we have been able to accumulate of the actual equipment of schools with books indicate that books are retained in use when they have become unpleasantly grubby and almost illegible through the wearing down of the dots, and that the range of books available for children's reading is unduly limited. On the balance of the facts we conclude that children in schools for the blind have not at their disposal anything like the wide range of reading which is open in schools to-day to children with sight, and that they would benefit by a larger supply of books more frequently renewed. The tedium of learning Braille is aggravated by the use of worn-out books, and we believe that Local Education Authorities would be justified generally in giving more generous grants to schools for books, both for classroom use and for school libraries. At the same time it appears that teachers of the blind who are not within reach of educational libraries, such as are maintained by the London County Council and by some other education authorities, are handicapped in selecting books for their children, and we think it probable that the demand for Braille books would be stimulated by giving teachers more information on the books selected for Brailling. We are impressed also by the evidence we have been given on the great importance of children being given individual attention in their early stages of learning Braille.

The conclusions at which we arrive are:

1. That a method closely analogous to the American method of publication of educational books in Braille should be adopted in this country, in order that schools on the one hand should have an adequate supply of reasonably clean and unworn school books for class and private reading, and that the waste of charitable and public money at present involved in the speculative publication of Braille for school use should be eliminated.

2. That, pending such a radical measure—

(*a*) A Consultative Committee of educationists should continue to advise the National Institute for the Blind on the selection of books for school use.

(*b*) The National Institute for the Blind and the Royal School for the Blind, Edinburgh, should stimulate demand for books in schools by circularizing the schools with information on the latest books available in Braille, and should offer to lend teachers of the blind letterpress copies of the books which have been put into Braille.

(*c*) Local Education Authorities should be impressed with the importance of enabling teachers of the blind to give more individual attention to blind children in their early difficulties in learning Braille, and of putting at the disposal of school authorities adequate funds for the purchase of Braille books and apparatus.

APPENDIX 1

STATISTICAL TABLES

The material for Tables 1–7 was collected by the Research Committee at the outset of its inquiry in the later part of 1931 and January 1932. Heads of Schools and Training Institutions throughout the country took time and trouble in filling in detailed questionnaires, and the information given was of great value to the Committee. To ask them to supply a further set of figures bringing the statistics up to date when the Report was complete would, in the view of the Committee, have been unreasonable, especially in view of the fact that the changes would have been small. The Tables as given may be relied upon as presenting a reasonably accurate picture of the position to-day.

TABLE 1

ACCOMMODATION IN SUNSHINE HOMES FOR BLIND BABIES (RESIDENTIAL)

As at January 31*st,* 1932 *

Name of Home.	Accommodation.	Resident Boys 31.1.32.	Resident Girls 31.1.32.	Total on Roll.
East Grinstead : Sunshine House	36	15	8	23
Leamington : Sunshine House .	30	10	11	21
Southport : Sunshine House .	30	16	9	25
	96	41	28	69

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* Owing to reorganization, the number of children in the Sunshine Homes at the date on which the Committee compiled its statistics was unusually low. The figures on January 31, 1936, were 89.

TABLE 2

Accommodation in Elementary Departments

As at January 31st, 1932

Name of School.	Accommodation.	Day Boys on Roll. 31.1.32.	Day Girls on Roll. 31.1.32.	Resident Boys. 31.1.32.	Resident Girls. 31.1.32.	Total on Roll. 31.1.32.	Number taught Braille.	Number not so taught.
Abbotskerswell: Court Grange	30	–	–	10	6	16	16	–
Birmingham: Royal Institution—								
(*a*) Kindergarten	45	–	–	18	24	42	31	11
(*b*) School	143	21	18	40	41	120	78	42
Bolton: Thomasson School	75	12	12	14	7	45	32	13
Bridgend: Glamorgan Institution	100	2	1	42	32	77	64	13
Brighton:								
Barclay School for Girls	69	–	–	–	69	69	68	1
Boys' School	60	–	–	59	–	59	35	24
Bristol: Royal School	117	–	–	41	45	86	86	–
Burnley: Tarleton House	30	8	11	–	–	19	19	–
Cardiff Day School	60	35	25	–	–	60	11	49
Exeter: West of England Institution	85	–	–	37	27	64	39	25
Gorleston: East Anglian School	90	–	–	55	34	89	89	–
Leeds: Blenheim Walk	100	13	10	40	31	94	94	–
Leicester Day School	60	28	24	–	–	52	15	37
Liverpool: Catholic Blind Asylum	128	–	–	40	41	81	81	–
Wavertree: School for the Indigent Blind	85	1	3	47	26	77	77	–
London:								
*Asylum Road. L.C.C.	72	30	30	–	–	60	60	–
East London Home and School	57	–	–	26	18	44	44	–
Elm Court. L.C.C.	79	–	7	–	35	42	42	–
*Enfield Road. L.C.C.	60	21	17	–	–	38	38	–
Linden Lodge. L.C.C.	40	10	–	28	–	38	38	–
London Society (Swiss Cottage)	90	2	5	41	38	86	86	–
Royal Normal College	29	–	–	12	8	20	20	–
*Shillington Street. L.C.C.	45	15	8	–	–	23	23	–
Manchester: Henshaw's Blind Asylum	147	6	1	58	41	106	106	–
Newcastle: Royal Victoria School	94	–	–	52	42	94	94	–
Nottingham Day School	45	15	14	–	–	29	14	15
Oldham Day School	40	11	22	–	–	33	7	26
Preston Industrial Institute	48	–	–	21	23	44	44	–
Rhyl: North Wales School	24	–	–	6	8	14	14	–
Sheffield: Royal Blind School	80	–	–	40	40	80	80	–
*Southsea: Hants and Isle of Wight School	60	4	7	25	11	47	27	20
Stoke-on-Trent School	46	–	–	24	15	39	39	–
Sunderland	20	6	14	–	–	20	20	–
Yorkshire School for the Blind	80	–	–	46	30	76	76	–
Total	2433	240	229	822	692	1983	1707	276

* Closed since compilation of Tables.

TABLE 3

ANALYSIS OF BLIND CHILDREN ACCORDING TO AGE OF ADMISSION TO THIS OR ANY OTHER SCHOOL FOR THE BLIND

As at January 31*st*, 1932

[*N.B.*—The term " blind children " as used in this Table denotes children who are, or will be, taught by Braille methods.]

	Under 4	4–5	5–6	6–7	7–8	8–9	9–10	10–11	11–12	12–13	13–14	14–15	15–16	TOTAL
Abbotskerswell	–	–	1	2	5	1	5	–	1	1	–	–	–	16
Birmingham :														
Kindergarten	6	2	16	3	3	1	–	–	–	–	–	–	–	31
Royal Institution	5	2	16	13	16	11	5	4	1	4	1	–	–	78
Bolton	3	–	2	4	6	7	5	2	2	–	1	–	–	32
Bridgend	–	–	10	10	12	5	6	8	7	1	4	1	–	64
Brighton :														
Barclay	–	–	5	13	12	13	3	8	8	5	1	–	–	68
Boys'	–	–	7	6	6	7	2	3	3	1	–	–	–	35
Bristol	1	–	25	15	13	10	6	5	5	5	–	1	–	86
Burnley	–	1	6	4	2	4	1	1	–	–	–	–	–	19
Cardiff	–	1	3	2	2	–	–	1	–	2	–	–	–	11
Exeter	–	–	5	11	5	4	5	5	2	–	1	–	1	39
Gorleston	–	–	10	11	20	14	9	12	4	6	1	2	–	89
Leeds	–	–	18	14	10	21	11	5	5	3	5	2	–	94
Leicester	–	1	5	1	2	3	2	–	–	1	–	–	–	15
Liverpool :														
Catholic Asylum	1	–	18	16	12	9	4	4	7	5	2	3	–	81
Wavertree	–	–	19	13	15	10	9	2	3	3	1	1	1	77
London :														
East London Home	–	–	11	5	5	7	4	6	3	2	1	–	–	44
London Society	–	1	12	15	15	14	9	12	3	1	1	2	1	86
Royal Normal College	–	–	8	3	3	3	1	2	–	–	–	–	–	20
L.C.C. :														
*Asylum Road						No return.								
Elm Court	1	4	15	5	7	2	4	–	–	1	2	1	–	42
*Enfield Road	–	–	–	5	4	6	–	7	13	3	–	–	–	38
Linden Lodge	1	1	13	5	4	1	4	2	3	1	1	2	–	38
*Shillington Street	–	1	8	9	3	–	2	–	–	–	–	–	–	23
Manchester	1	3	20	13	30	16	6	2	6	3	5	–	1	106
Newcastle	–	–	4	13	17	25	18	5	3	4	3	2	–	94
Nottingham	–	–	4	2	2	1	2	1	–	2	–	–	–	14
Oldham	–	–	3	2	–	2	–	–	–	–	–	–	–	7
Preston	–	–	10	6	8	8	3	2	2	2	1	2	–	44
Rhyl	–	1	3	2	3	–	1	2	2	–	–	–	–	14
Sheffield	–	1	16	11	15	11	10	4	5	4	3	–	–	80
*Southsea :														
Hants and Isle of Wight School	–	–	14	2	3	7	1	–	–	–	–	–	–	27
Stoke-on-Trent	–	–	7	8	6	6	2	3	4	2	–	1	–	39
Sunderland	–	–	2	–	3	1	1	1	4	1	2	2	3	20
York	–	–	14	7	18	9	10	5	4	2	3	2	2	76
	19	19	330	251	287	239	151	114	100	65	39	24	9	1647

* Closed since compilation of Tables.

TABLE 4

Accommodation in Secondary Schools

As at January 31st, 1932

	Accommodation.	No. of Pupils. 31.1.32.	No. taught Braille.	No. not so taught.	Paid for wholly or in part by L.E.A.
Chorleywood College .	45	35	35	—	17
Royal Normal College . .	20	15	15	—	13
Worcester College . .	50	46	46	—	24

TABLE 5

TRAINING CENTRES: GIVING ACCOMMODATION AND NUMBER ON ROLL

As at January 31st, 1932

	Accommodation.	Resident Males.		Non-Resident Males.		Resident Females.		Non-Resident Females.		Total on Roll 31.1.32.
		16–21	21+	16–21	21+	16–21	21+	16–21	21+	
Birmingham	105	24	17	5	13	25	1	9	7	101
Blackburn.	25	—	—	4	1	—	—	4	1	10
Bolton	45	—	—	8	10	1	—	5	1	25
Bradford	20	—	1	1	11	—	1	—	2	16
Brighton (Barclay) . .	18	–	–	–	–	12	3	–	6	21
Bristol :										
(Westbury) . . .	33	19	–	–	–	14	–	–	–	33
(School of Industry) .	24	–	–	–	8	–	–	–	3	11
Burnley	12	–	–	1	1	–	–	5	2	9
Cardiff	13	–	–	5	7	–	–	1	–	13
Dewsbury	14	–	–	1	2	–	–	1	1	5
Exeter	15	8	–	2	–	4	–	–	–	14
Halifax	29	–	–	4	6	–	–	3	–	13
Hull	30	–	–	6	9	–	–	5	2	22
Leatherhead	250	57	31	–	–	18	10	–	–	116
Leeds	66	6	5	13	14	11	3	6	4	62
Leicester	40	1	1	3	5	–	–	2	4	16
Liverpool :										
Catholic Asylum . .	48	13	4	–	–	12	5	–	–	34
Hardman St. . . .	84	34	14	–	–	24	7	–	–	79
Llwynypia	80				No return.					
London :										
Barclay	10	–	–	–	–	–	–	1	6	7
Elm Court L.C.C. . .	–	–	–	–	–	–	–	5	–	5
L.A.B.	Variable	2	4	1	5	4	4	–	4	24
London Society Swiss Cottage	80	26	–	7	13	17	–	1	9	73
Nat. Inst. Massage .	18	–	–	1	12	–	–	–	3	16
Royal Normal College	96	41	8	–	3	16	6	–	–	74
Tottenham Court Road	66	–	–	8	43	–	–	2	4	57
Greenwich	20	–	–	2	18	–	–	–	–	20
Manchester	161	36	29	1	24	30	6	6	6	138
Middlesbrough . . .	20	–	–	4	7	–	–	4	2	17
Newcastle	70	11	12	4	5	16	6	–	1	55
Norwich	34	1	4	3	4	–	4	2	1	19
Nottingham	92	26	25	7	7	6	5	1	–	77
Plymouth	55	1	8	1	3	1	1	4	1	20
Pontypridd	25	–	–	1	18	–	–	–	–	19
Portsmouth	50	–	–	4	24	–	–	5	8	41
Preston	24	4	5	–	7	8	2	2	1	29
Sheffield	41	–	–	15	2	–	–	10	4	31
Stoke-on-Trent . . .	34	–	–	7	13	–	–	9	5	34
Sunderland	20	–	–	7	–	–	–	5	–	12
Swansea	64	–	6	–	8	4	8	–	–	26
Tynemouth	10	–	–	2	–	–	–	–	–	2
York	10	5	–	–	3	8	–	–	1	17
	1951	315	174	128	306	231	72	98	89	1413

Since the compilation of this Table the total number of trainees has fallen by 176 (males by 97, females by 79).

TABL

* Subjects Taught in Training Centres as at January 31st, 1932.	Baskets.	Bedding.	Boots.	Brushes.	Chair Seating (Cane and Rush).	Coal Bags.	Domestic Science.	Fenders.	French Polishing.
Birmingham Royal Institution	15 m.	–	–	–	–	–	–	–	–
	1 m.	–	13 m.	14 m.	*1 m.*	–	–	–	–
	19 f.	–	–	2 f.	*9 f.*	–	–	–	–
Blackburn and District Workshops	–	–	–	5 m.	–	–	–	–	–
Bolton Workshops and Homes	*7 f.*	–	–	7 m.	*7 f.*	–	–	–	–
Bradford Royal Institution	1 m.	10 m.	–	2 m.	–	–	–	–	–
Brighton: Barclay Home	2 f.	–	–	–	–	–	–	–	–
Bristol:									
(*a*) School of Industry	6 m.	–	–	–	–	–	–	–	–
	1 f.	–	–	–	–	–	–	–	–
(*b*) Westbury-on-Trym	*4 m.*	–	–	–	–	–	–	–	–
	6 m.	–	–	–	–	–	–	–	–
Burnley: Tarleton House	1 m.	–	1 m.	–	–	–	–	–	–
Cardiff: Institute for Blind	2 m.	–	–	4 m.	–	3 m.	–	1 m.	–
Dewsbury Institution .	3 m.	–	–	–	*2 f.*	–	–	–	–
Exeter: West of England Institution	8 m.	–	*2 m.*	–	*8 m.*	–	2 f.	–	–
	–	–	–	–	1 f.	–	–	–	–
Halifax Society . . .	4 m.	–	–	–	*3 f.*	2 m.	–	–	–
Hull and East Riding Institution	8 m.	–	3 m.	3 m.	–	–	–	–	–
	–	–	–	3 f.	–	–	–	–	–
Leatherhead: Royal School	42 m.	–	22 m.	7 m.	–	–	–	–	–
	1 f.	–	–	1 f.	–	–	–	–	–
Leeds: Technical Training School	7 m.	–	6 m.	12 m.	–	–	–	–	–
	24 f.	–	–	–	–	–	–	–	–
Leicester Institution .	7 m.	–	–	3 m.	3 f.	–	–	–	–
	3 f.	–	–	–	–	–	–	–	–
Liverpool:									
Catholic Asylum . .	6 m.	–	–	–	*15 f.*	–	–	–	–
	6 m.	–	–	–	–	–	–	–	–
School for the Blind .	*30 m.*	–	10 m.	–	*30 m.*	–	–	–	–
	–	–	–	–	*31 f.*	–	–	–	–
Llwynypia: Rhondda Institution	4 m.	–	–	5 m.	–	2 m.	–	–	–

* Where one trainee learns two trades, figures are given in italics.

Furniture.	Knitting.	Massage.	Mats.	Music.	Piano-tuning.	Rug-making.	Skip-making.	Teaching.	Typewriting.	Upholstery.	Weaving.	Woodwork.
–	1 m.	–	–	–	–	–	–	–	–	–	–	–
–	18 f.	–	–	–	–	–	–	–	–	–	–	–
–	*10 f.*	–	–	3 f.	15 m.	–	–	–	*3 f.*	–	–	–
–	5 f.	–	–	–	–	–	–	–	–	–	–	–
–	*7 f.*	–	10 m.	–	–	*7 f.*	1 m.	–	–	–	–	–
–	3 f.	–	–	–	–	–	–	–	–	–	–	–
–	15 f.	–	–	–	–	–	–	–	–	–	4 f.	–
–	2 f.	–	2 m.	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	12 f.	–	3 m.	*6 m.*	*6 m.*	–	–	–	–	–	–	–
–	*2 f.*	–	–	*2 f.*	*2 f.*	–	–	–	–	–	–	–
–	7 f.	–	–	–	–	–	–	–	–	–	–	–
–	1 f.	–	2 m.	–	–	–	–	–	–	–	–	–
–	*2 f.*	–	–	–	–	–	–	–	–	–	–	–
–	1 f.	–	–	–	*1 f.*	–	–	–	–	–	–	–
–	–	–	–	–	2 m.	–	–	–	–	–	–	–
–	*3 f.*	–	4 m.	–	–	–	–	–	–	–	–	–
–	4 f.	–	1 m.	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	26 f.	–	9 m.	–	8 m.	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	*24 f.*	–	12 m.	–	1 m.	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	*15 f.*	–	5 m.	–	*6 m.*	–	–	–	–	–	2 f.	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	*31 f.*	–	8 m.	–	–	*31 f.*	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	6 f.	–	4 m.	–	–	–	–	–	–	–	–	–

TABLE

Subjects Taught in Training Centres as at January 31st, 1932.	Baskets.	Bedding.	Boots.	Brushes.	Chair Seating (Cane and Rush).	Coal Bags.	Domestic Science.	Fenders.	French Polishing.
London:									
Barclay Workshops	–	–	–	–	–	–	–	–	–
Elm Court	–	–	–	–	–	–	–	–	–
Greenwich Workshops	12 m.	1 m.	–	–	4 m.	–	–	3 m.	–
L.A.B.	12 m. 5 f.	– –	– –	– –	– –	– –	– –	– –	– –
London Society (Swiss Cottage)	25 m.	–	10 m.	–	–	–	–	–	–
Massage School (N.I.B.)	– –	– –	– –	– –	– –	– –	– –	– –	– –
Royal Normal College	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –	– – –
Tottenham Court Road	23 m. –	12 m. 2 f.	– –	18 m. 2 f.	– –	– –	– –	– –	– –
Manchester: Henshaw's	17 m. 11 f.	– –	14 m. –	19 m. 1 f.	*6 f.* –	– –	– –	– –	4 f. –
Middlesbrough: Cleveland Inst.	3 m. *3 f.*	– –	– –	– 4 m	– *3 f.*	– –	– –	– –	– –
Newcastle: Royal Vic. School	18 m. *23 f.*	9 m. –	– –	– –	*23 f.* –	– –	– –	– –	– –
Norwich Institution	7 m.	–	–	–	–	–	–	–	–
Nottingham: Midland Institution	9 m.	–	22 m.	14 m.	12 m.	–	–	–	–
Plymouth: S. Devon and Cornwall Inst.	*6 m.* *1 f.*	– –	6 m. –	– –	*6 f.* –	– –	– –	– –	– –
Pontypridd Institution	7 m.	–	–	–	–	–	–	–	–
Portsmouth Workshops	10 m. –	– –	2 m. –	15 m. 5 f.	1 f. –	– –	– –	– –	– –
Preston Institute	1 m. 2 f.	– –	10 m. –	4 m. 1 f.	1 m. 2 f.	– –	– –	– –	– –
Sheffield Institution	2 m.	–	7 m.	3 m.	6 f.	–	–	–	–
Stoke-on-Trent	6 m. *14 f.*	– –	– –	11 m. –	– –	– –	– –	– –	– –
Sunderland	4 m.	–	–	–	2 f.	–	–	2 m.	–
Swansea	2 m.	–	9 m.	3 m.	–	–	–	–	–
Tynemouth	2 m.	–	–	–	–	–	–	–	–
Yorkshire School for Blind	5 m. *1 m.*	– –	– –	2 m. –	*9 f.* –	– –	– –	– –	– –
	333 m. 116 f.	32 m. 2 f.	137 m.	155 m. 15 f.	56 m. 129 f.	7 m.	2 f.	6 m.	4 f

—*continued*

Furniture.	Knitting.	Massage.	Mats.	Music.	Piano-tuning.	Rug-making.	Skip-making.	Teaching.	Typewriting.	Upholstery.	Weaving.	Woodwork.
–	7 f.	–	–	–	–	–	–	–	–	–	–	–
–	6 f.	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	
–	7 f.	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	27 f.	–	–	–	11 m.	–	–	–	–	–	–	–
												–
–	–	13 m.	–	–	–	–	–	–	–	–	–	–
–	–	3 f.	–	–	–	–	–	–	–	–	–	–
–	–	–	–	5 m.	*16 m.*	–	–	2 f.	2 m.	–	–	–
–	–	–	–	9 f.	29 m.	–	–	–	11 f.	–	–	–
–	–	–	–	*16 m.*	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	19 f.	–	5 m.	*12 m.*	*12 m.*	–	–	–	–	*6 f.*	4 f.	23 m.
–	–	–	–	3 f.	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	1 f.	–	4 m.	–	–	–	–	–	–	–	2 f.	–
–	*23 f.*	–	5 m.	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	7 f.	–	5 m.	–	–	–	–	–	–	–	–	–
–	12 f.	–	4 m.	–	4 m.	–	–	–	–	–	–	–
6 m.	*6 f.*	–	1 m.	–	–	–	–	–	–	–	–	–
1 f.	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	12 m.	–	–	–	–	–	–	–	–	–
–	7 f.	–	1 m.	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	8 f.	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	5 f.	–	5 m.	–	–	–	–	–	–	–	3 f.	–
–	*14 f.*	–	3 m.	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	3 f.	–	1 m.	–	–	–	–	–	–	–	–	–
–	8 f.	–	–	–	–	–	–	–	–	–	4 f.	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	*9 f.*	–	*1 m.*	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
6 m. 1 f.	1 m. 363 f.	13 m. 3 f.	107 m.	39 m. 17 f.	110 m. 3 f.	38 f.	1 m.	2 f.	2 m. 14 f.	6 f.	19 f.	23 m.

TABL

Table relating to Staffing in Schools and Training Institutions.	Full Time.	Part Time.	Blind.	Partially Blind.	Seeing.	Certificated and College Trained.	Certificated *not* College Trained.	Uncertificated.	Secondary Training.
Abbotskerswell: Court Grange	2	–	–	–	2	1	–	1	–
Birmingham:									
Kindergarten	4	1	1	–	4	4	–	–	–
Royal Institution	20	5	3	9	13	5	1	3	–
Blackburn Workshops	3	–	–	–	3	–	–	–	–
Bolton: Thomasson School	4	2	1	2	3	3	1	–	–
Bolton Workshops	10	1	1	2	8	–	–	–	2
Bradford Royal Institution	–	8	–	–	8	–	–	7	–
Bridgend: Glamorgan Institution	9	5	3	3	8	3	1	1	–
Brighton:									
Barclay Home	5	3	2	–	6	1	–	3	–
Boys' School	5	–	1	–	4	–	1	2	–
Bristol:									
Royal School	13	3	2	1	13	3	1	3	–
Blind Asylum	1	2	–	1	2	–	–	–	–
Burnley: Tarleton House	2	3	–	–	5	2	–	–	–
Cardiff:									
Day School	4	1	1	1	3	4	–	–	–
Institute	–	10	1	1	8	2	–	7	2
Dewsbury: Institution for the Blind	2	–	–	–	2	–	–	–	–
East Grinstead: Sunshine Home	2	–	–	–	2	1	–	–	–
Exeter: West of England Institution	9	4	3	–	10	3	1	4	–
Gorleston: East Anglian School	7	3	1	1	8	6	–	–	–
Halifax Society for the Blind	2	5	1	–	6	–	–	1	–
Hull Institute	6	–	1	–	5	–	–	–	–

7

Others (excluding Craft Teachers).	Craft Teacher with C.T. Certificate.	Craft Teacher without C.T. Certificate.	Subject Taught if Craft Teacher.	Subject Taught if Specialist Teacher.
–	–	–		Music 1, Froebel Certif. 2.
–	–	–		Drill mistress from Royal Inst. gives part time.
–	1	9	Machine Knitting 2, Baskets and Machine Knitting 1, Baskets and Caning 2, Baskets 1, Boots 1, Brushes 1, Tuning 1, Carpentry 1.	Physical Training 1, Music 4, Housewifery 1, Typing and Shorthand 1.
–	–	3	Brush-making, Skip-making, Knitting.	
–	–	–	Boots 1.	Music 1.
–	–	6		Music 1.
–	–	7	Baskets 1, Mats 1, Brushes 1, Boots 1, Mattresses 1, Machine Knitting 1, Hand Knitting 1.	
5	1	3	Baskets 1, Boots 1, Machine Knitting 1, Woodwork 1, Domestic Science 1.	Music 3, Welsh 1, Kindergarten 1.
1	–	2	Knitting and Weaving 1, Knitting and Baskets 1.	Physical Training 1, Froebel Certif. 1, Music 1.
–	–	1	Baskets 1.	Music 1.
–	–	4	Baskets 1, Mats 1, Tuning 1, Knitting 1.	Music 4, Physical Training 2.
–	–	3	Baskets 1, Mats 1, Knitting 1.	
–	–	–	Boots 1, Baskets 1, Machine Knitting 1.	
–	–	1	Woodwork 1.	
–	–	7	Baskets 2, Baskets and Caning 1, Mats 1, Fenders 1, Brushes 1, Knitting 1.	Civics and Economics 1, Music 1, Physical Training 1.
–	–	2	Baskets 1, Knitting and Caning 1.	
–	–	–		Head Teacher holds Froebel or Montessori Certificate.
2	–	4	Baskets 1, Boots 1, Woodwork 1, Machine Knitting 1, Tuning 1.	Music 1, Physical Training 1, Domestic Science 1.
–	–	2	Baskets 1, Boots 1.	Physical Training 1, Domestic Science 1.
–	–	5	Baskets 1, Mats 1, Boots and Sacks 1, Knitting and Caning 1.	
–	–	6	Brushes 1, Baskets 2, Boots 1, Mats 1, Machine Knitting 1.	

Table relating to Staffing in Schools and Training Institutions.	Full Time.	Part Time.	Blind.	Partially Blind.	Seeing.	Certificated and College Trained.	Certificated *not* College Trained.	Uncertificated.	Secondary Training.
Leatherhead	13	1	–	3	11	–	1	1	1
Leamington, Sunshine House	2	–	–	–	2	1	–	–	–
Leeds:									
Blenheim Walk	10	1	2	2	7	6	2	2	–
Training School	7	3	1	–	9	3	–	–	–
Leicester:									
Day School	4	1	1	–	4	1	3	–	1
Institution	–	5	–	–	5	1	–	–	–
Liverpool:									
Catholic Asylum	12	1	3	4	6	5	–	–	–
Hardman Street and Wavertree	17	–	3	3	11	3	1	4	1
Llwynypia: Rhondda Institution	3	1	–	1	3	–	–	1	1
London:									
Barclay Workshops	1	1	–	1	1	–	2	–	–
Tottenham Court Road	3	6	1	–	8	–	–	–	–
East London Home	4	3	1	1	5	2	1	1	–
London Association for the Blind	–	8	1	–	7	–	–	8	–
London Society for Teaching and Training Blind	15	3	4	–	14	5	–	1	–
N.I.B. Massage School	–	9	1	3	5	1	5	–	–
Royal Normal College	15	4	8	1	10	3	1	2	2
Workshops for Blind (Greenwich)	2	–	–	–	2	–	–	2	–
L.C.C.									
Asylum Road	5	1	3	–	3	5	–	–	–
Elm Court	5	1	1	–	5	2	2	–	–
Enfield Road	3	2	2	1	2	3	–	–	–
Linden Lodge	5	2	1	1	5	3	–	–	–
Shillington Street	2	2	2	–	2	1	1	–	–
Manchester: Henshaw's School and Tech. Training Dept.	19	12	6	3	22	1	2	4	–
Middlesbrough: Cleveland Institute	–	6	–	–	6	–	–	–	–

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* In addition there are 7 visiting teacher

—*continued*

Others (excluding Craft Teachers).	Craft Teacher with C.T. Certificate.	Craft Teacher without C.T. Certificate.	Subject Taught if Craft Teacher.	Subject Taught if Specialist Teacher.
1	1	10	Baskets 4, Mats 2, Brushes 1, Tuning 1, Boots 1, Knitting 3.	
–	–	–		Head Teacher holds Froebel or Montessori Certificate.
–	–	1	Baskets 1, Machine Knitting 1.	Music and Singing 2.
–	1	6	Baskets 2, Brushes 1, Mats 1, Knitting 1, Tuning 1, Boots 1.	Physical Training 1.
–	–	–		Music 1.
–	–	4	Baskets 1, Brushes 1, Chair-seating and Knitting 1, Wood-chopping 1.	General Subjects and Braille 1.
–	–	–	Mats 1, Baskets 2, Tuning 1, Knitting and Caning 2.	
–	–	9	Baskets 3, Baskets and Caning 1, Boots 2, Mats 1, Knitting 2.	
–	–	–	Baskets 1, Mats 1, Knitting 1.	Braille 1.
–	–	–	Weaving and Machine Knitting 1, Machine Knitting 1.	
–	–	–	Baskets 3, Brushes 2, Bedding 3, Netting 1.	
–	–	–	Baskets 1.	Music 2.
–	–	8	Machine Knitting 1, Baskets 6, Knitting Needle-making 1.	
–	–	1	Baskets 3, Boots 1, Handwork 1, Knitting 1, Tuning and Repairs 3.	Physical Training. Music 2.
–	–	–		
–	–	–	Tuning 3.	* Music 4, Typing and Shorthand 1, Shorthand 1, Physical Training 1, Music and Physical Training 1.
–	–	–	Baskets and Chair Caning 1.	
–	–	–		Music (half-day weekly).
–	–	2	Machine Knitting 1.	Music 1.
–	–	–		Music 1, Physical Training 1.
–	–	1	Mats, Metal Work, Woodwork 1, Baskets and Caning 1.	Physical Training 1, Music and Singing 1.
–	–	–		
–	–	19	Baskets 3, Brushes 3, Tuning 1, Woodwork 2, Mats 3, Knitting 2, Boots 2, Upholstery 1, Weaving 1, French Polishing 1.	Music 3, Singing 1.
–	–	–	Knitting 1, Baskets 1, Mats 1, Brushes 1, Weaving, Caning and Baskets 1.	

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for music (a few hours weekly).

TABL

Table relating to Staffing in Schools and Training Institutions.	Full Time.	Part Time.	Blind.	Partially Blind.	Seeing.	Certificated and College Trained.	Certificated *not* College Trained.	Uncertificated.	Secondary Training.
Newcastle Royal Victoria School	13	1	4	2	8	6	–	–	–
Norwich Institution	5	–	–	–	5	1	–	–	–
Nottingham:									
Day School	3	–	1	1	1	2	–	1	–
Midland Institution	4	10	4	–	10	4	–	9	–
Oldham: Day School	2	–	–	–	2	2	–	–	–
Plymouth: S. Devon and Cornwall Institution	7	2	3	–	6	–	–	9	–
Preston Industrial Institution	4	–	1	–	3	2	–	1	–
Pontypridd Institution	2	1	1	2	–	–	–	2	–
Portsmouth Workshops	–	9	–	–	9	–	–	–	1
Rhyl: North Wales School	2	–	1	–	1	2	–	–	–
Sheffield:									
Royal Blind School	7	1	1	1	6	4	–	1	4
Corporation Workshops	9	1	1	–	9	–	–	–	–
Southport: Sunshine Home	2	–	–	–	2	–	–	–	–
Southsea: Hants and Isle of Wight School	5	1	2	–	4	4	–	–	–
Stoke-on-Trent: School	4	–	–	–	4	1	2	1	–
Stoke-on-Trent: Training Centre	5	1	–	–	6	1	–	–	–
Sunderland: Durham Royal Institution	11	–	1	1	9	–	6	5	–
Sunderland: Day School	2	–	–	–	2	2	–	–	–
Swansea	6	1	2	–	5	–	–	–	–
Tynemouth	2	–	1	1	–	–	–	–	–
York	9	5	2	1	11	4	1	1	–
Secondary Schools.									
Chorleywood	6	6	1	1	10	–	–	–	2
Worcester	7	6	2	2	9	1	–	–	2
	374	174	91	57	400	120	36	88	19

—*continued*

Others (excluding Craft Teachers).	Craft Teacher with C.T. Certificate.	Craft Teacher without C.T. Certificate.	Subject Taught if Craft Teacher.	Subject Taught if Specialist Teacher.
–	–	7	Baskets 3, Mats, Mattresses 1, Machine Knitting 1, Baskets and Caning 1.	Piano, Organ and Singing 1.
1	1	3	Machine Knitting 2, Baskets 1, Mats 1.	
–	–	–		
–	–	–	Machine Knitting 2, Piano-tuning 1, Boots 1, Brush-making 1, Baskets 1, Carpentry 1.	Braille 1, Music 1, Physical Training 2, Typewriting 1.
–	–	–		
–	–	7	Mats 1, Boots 1, Baskets and Cane Furniture 2, Knitting 1, Baskets 1, Caning 1.	
–	–	–		Music 1.
–	–	–	Mats 1, Baskets 1, Mats and Baskets 1.	
–	3	2	Brushes 1, Baskets 1, Mats 1, Boots 1, Machine Knitting 1.	Physical Training 2, General Subjects 1.
–	–	–		
–	–	–	Baskets, Mats, Brushes 1, Woodwork 1.	Piano, Organ, Singing 1.
–	2	8	Brushes 2, Baskets 2, Mats 1, Boots 1, Machine Knitting 3, Chair Caning 1.	
–	–	–		Head Teacher holds Froebel or Montessori Certificate.
–	–	1	Baskets 1.	Music 1.
–	–	–		
–	–	–	Baskets 2, Baskets and Knitting 1, Mats 1, Brushes 1.	English Subjects 1.
–	–	–		
–	–	–		
–	–	6	Boots 1, Baskets 1, Knitting 1, Weaving 1, Brushes 1, Mats 1.	Music and General Subjects 1.
–	–	–	Baskets 1, Caning 1.	
4	–	4	Baskets 2, Machine Knitting 1, Chair Caning 1.	Music 2, Physical Training 2.
–	–	–		Music 2, Dancing 1, Physical Training 1, Typing 1.
–	–	1		Music 3, Braille Music 1, Dancing 1.
14	10	165		

TABLE 8

RETURNS MADE TO THE BOARD OF EDUCATION ON DECEMBER 31ST IN EACH YEAR BY SCHOOL MEDICAL OFFICERS OF THE ASCERTAINMENT OF BLIND AND PARTIALLY-SIGHTED CHILDREN

Year.	Attending Certified Special Schools.	Attending Public Elementary Schools.	At other Institutions.	At no School or Institution.	Total.	Average on the Register of Public and other Elementary Schools.	Proportion of Blind (or partially-sighted) Children to Children in Public or other Elementary Schools. 1 per :—
I. *Blind Children*							
1924	1675	60	34	279	2048	5,641,500	2755
1925	1642	63	33	262	2000	5,677,075	2839
1926	1635	53	38	262	1988	5,681,718	2858
1927	1560	60	30	275	1925	5,664,616	2943
1928	1555	47	36	249	1887	5,628,440	2983
1929	1467	31	33	205	1736	5,601,807	3227
1930	1488	43	36	185	1752	5,596,744	3194
1931	1441	30	33	138	1632	5,638,722	3455
1932	1435	23	24	132	1614	5,698,383	3531
1933	1307	19	33	139	1498	5,712,423	3813
1934	1249	22	37	122	1430	5,531,950	3868
II. *Partially-sighted Children*							
1924	1992	1857	21	286	4156	5,641,500	1357
1925	2258	2069	26	239	4692	5,677,075	1210
1926	2280	2230	10	371	4891	5,681,718	1162
1927	2451	2094	32	352	4929	5,664,616	1149
1928	2714	2122	36	353	5225	5,628,440	1077
1929	2760	2195	47	352	5354	5,601,807	1046
1930	2771	1986	52	335	5144	5,596,744	1088
1931	2789	1944	64	275	5072	5,638,722	1112
1932	2788	1952	86	242	5068	5,698,483	1124
1933	2778	1880	68	228	4954	5,712,423	1153
1934	2562	1732	77	210	4581	5,531,950	1208

TABLE 9

Returns made to the Board of Education by Schools for the Blind on March 31st in each Year

Elementary Schools for the Blind.

Year.	Accommodation.			On the Roll.						
				Boys.		Girls.		Total.		
	Day.	Boarders.	Total.	Day.	Boarders.	Day.	Boarders.	Day.	Boarders.	Total.
1919–20	1452	1759	3211	694	766	816	658	1510	1424	2934
1920–1	1672	1778	3450	821	793	921	690	1742	1483	3225
1921–2	1783	1778	3561	905	794	981	694	1886	1488	3374
1922–3	1849	1702	3551	952	793	1031	682	1983	1475	3458
1923–4	2014	1758	3772	995	851	1072	725	2067	1576	3643
1924–5	2339	1732	4071	1049	844	1164	725	2213	1569	3782
1925–6	2441	1775	4216	1078	901	1211	768	2298	1669	3958
1926–7	2531	1775	4306	1073	886	1221	765	2294	1651	3945
1927–8	2694	1790	4484	1162	897	1359	776	2521	1673	4194
1928–9	2715	1843	4558	1212	902	1358	743	2570	1645	4215
1929–30	2775	1872	4674	1232	883	1382	745	2614	1628	4242
1930–1	2849	1883	4732	1235	894	1388	745	2623	1639	4262
1931–2	2866	1961	4827	1215	898	1372	746	2587	1644	4231
1932–3	2902	1894	4796	1187	900	1345	750	2532	1650	4182
1933–4	2862	1898	4760	1100	904	1244	720	2344	1624	3968
1934–5	2746	1904	4650	1030	902	1095	728	2125	1630	3755

Statistics were obtained for the first time in 1931–2 showing the number of scholars (*a*) taught Braille, (*b*) not taught Braille. These distinguish between day and residential scholars, but not between boys and girls. The figures are as follows :

Year.	Taught Braille.			Not taught Braille.			Grand Total.
	Day.	Boarders.	Total.	Day.	Boarders.	Total.	
1931–2	320	1473	1793	2267	171	2438	4231
1932–3	300	1448	1748	2232	202	2434	4182
1933–4	247	1425	1672	2097	199	2296	3968
1934–5	193	1383	1576	1932	247	2179	3755

TABLE 10

Table based on the Figures of the Blind registered under the Blind Persons Act, 1920, published in the Reports of the Advisory Committee on the Welfare of the Blind

Advisory Committee's Report. (*a*)	Date of the Figures. (*b*)	Total of all Registered Blind. (*c*)	Registered Blind between the ages of 5 and 16 Years of Age. (*d*)	Column (*d*) expressed as a percentage of column (*c*). (*e*)
				Per cent.
Second . . .	April 1, 1920	30,708	2366	7·7
Third. . . .	April 1, 1921	34,894	2563	7·3
Fifth	June 30, 1923	36,518	2723	7·4
Sixth . . .	March 31, 1925	42,140	2720	6·4
Seventh . . .	March 31, 1927	46,822	2554	5·4
Eighth . . .	March 31, 1929	52,727	2438	4·6
Tenth . . .	March 31, 1932	62,079	2066	3·3
Eleventh. . .	March 31, 1933	63,408	2089	3·3

In the nine years between 1923 and 1932 the number of blind children between 5 and 16 years of age was reduced by 657 or 24 per cent.

Note on Tables 8, 9, 10

There are discrepancies between the figures of blind children given in Tables 8, 9, and 10, probably partly due to the fact that the line between the blind and the partially sighted is drawn in different places by various Headmasters, School Medical Officers, and Registration Officers under the Blind Persons Act.

* The discrepancy between the total of ascertained blind children in 1933, which is given in Table 8 as 1,498 and in Table 10 as 2,089, is probably due to a number of different factors, e.g. :

1. School Medical Officers formerly sometimes entered blind children who were mentally defective under the heading

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* The discrepancy is actually slightly worse than it appears because in the figure 1,498 (but not in the figure 2,089) some children under the age of 5 are included.

Mentally Deficient, but not under the heading Blind. The Board's Tables have now been amended in this respect.

2. It is probable that some partially blind children are included in the Register of Blind Persons who may appear as partially sighted in the education figures.

3. The Register of Blind Persons includes Poor Law children who are not always included in the statistics ascertained by School Medical Officers. This discrepancy will progressively tend to disappear in consequence of the Local Government Act 1929.

4. The Register of Blind Persons includes children who are not of the Public Elementary School type.

5. Children who are not at a special school and are over the age of 14 will not be included in the statistics collected by School Medical Officers, though they probably will be included in the Register of Blind Persons.

APPENDIX 2

REPORT TO THE JOINT COMMITTEE ON EDUCATIONAL RESEARCH ON PHYSICAL EDUCATION IN SCHOOLS FOR BLIND CHILDREN WITH SPECIAL REFERENCE TO TEN TYPICAL SCHOOLS VISITED MAY TO JULY 1932

by

ANNA BROMAN,
M.R.C.S., L.R.C.P.

and

V. VULLIAMY,
C.S.M.M.G.

(*a*) General Report.
(*b*) Reports on Individual Schools.
  Chart A. Analysis of most common Orthopædic Defects.
  Chart B. Analysis of Physical Exercise Tables.
(*c*) School and Workshop Furniture and Equipment.
(*d*) Sketches of typical Work Postures observed at Visited Schools.

[N.B.—The sketches are only intended for the general guidance of the reader, and do not profess to be anatomically correct.]

a. *General Report*

In the month of April 1932, the Research Committee decided that an investigation into ten typical schools for the blind should be carried out by a physical educationist and an orthopædist. It was hoped that such an investigation would be of substantial assistance in providing the necessary material for evolving a really satisfactory scheme of physical education for the blind. It would also enable the Committee to suggest immediate reforms along such lines as the elimination of unsuitable exercises and the improvement of school furniture, and might also elicit suggestions for improving the training of those teachers who are charged with the physical education of blind children.

We, the undersigned, were appointed by your Committee to carry out this investigation. Through your introductions and the courtesy of the Authorities and Staffs of the various schools we have been able to study in detail and at first hand the work being done in these typical residential schools and day centres. We have endeavoured to keep our terms of reference closely in view, and offer below a series of proposals on all the three heads.

It may serve as a guide to the Committee if we mention at this stage that we have incorporated in our Report some illustrations of typical faulty postures, an analysis of orthopædic defects and an analysis of Physical Exercise Tables. We have also added notes on individual schools, and a statement on school and workshop furniture and equipment.

In spite of the great care and attention given to physical welfare at the various schools, we found a widespread prevalence of preventable defects which often in unskilled hands might be increased by attempted assistance. We found also that in many schools the physical care of the children suffered from being divided into water-tight compartments. It was not realized that there should be the closest co-operation between the physical training teacher, the class teacher, the matron and the medical officer. The physical training teacher, for instance, might have no knowledge of harmful sedentary postures in the classrooms, whilst the medical officer's interest in the effect of posture and exercises on health might in many cases be lukewarm. It was not generally realized that physical education is a very wide term. It does include special physical training, but only as one factor. It takes cognizance of diet, clothing, school buildings and furniture, facilities for playground and other open-air activities, hours of work, recreation and sleep and all general conditions affecting health. It was interesting to note that the best results were found in those schools where the life approximated most nearly to the normal. The beneficial effects of self-government in a school, for example, were reflected in physique as was also a wider social outlook.

As may be noted by reference to Chart A,* the remedial work being carried out in many of the schools is inadequate and even misguided. It is scarcely necessary to point out that such defects are not an inevitable condition. More knowledge and a wiser point of view are much more necessary for the attainment of reform than a large capital outlay.

It must, however, be premised that as the blind child because of his disability is different from the normal child, so his physical education must have features peculiar to itself. At the same time, it would be unwise to exaggerate these differences. Lack of sight prevents children from rushing about in free play, it hampers spontaneity of movement and renders difficult of attainment grace and suavity of poise and gesture. It gives a characteristic head carriage and makes progression hesitating and timid. It strikes back into the mind making blind boys and girls introspective and may, when uncorrected, lead to morbidity and a slackening of moral fibre. Moreover, the physical cause of blindness in itself may give rise to a condition of lowered resistance. When all is said on this head, however, the fact remains that a sound system of physical education is well within the compass of attainment for most schools. The very enumeration given above of some of the effects of blindness makes it patent that physical education should indeed play a more important part in the general educational scheme of an institution for blind children than in that of an ordinary school. Only so would it be possible to attain the ideal of a healthy and alert physique, bringing the blind child into social co-operation with his fellows and making it possible for him to take his rightful and responsible place in the community.

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* See p. 310.

The social factors for healthy growth and development may be summarized as proper proportion of rest and activity, air, sunlight, clothing, well-balanced diet and a free, natural, interesting and harmonious environment. We found some of these factors in each of the schools inspected, and the aim of our proposals will be to devise such a system as will bring together all of them in every school.

Before coming to the substantive proposals which we wish to make we think it well to inform the Committee of our procedure in visiting the various schools and to give an indication in broad outline of the main defects observed. Their recital will make evident in itself the lines along which reform must be sought.

Our procedure, then, was to relate the general posture which really expresses the normal growth and function of the child to the physical ability of the child as shown by his activities in the gymnasium and playgrounds.

In visiting the schools we had, therefore, to consider:

1. The physical ability of the child, as shown in the gymnasium and playground.
2. The growth and functional development of the child as affected by the system of physical training and as shown by orthopædic examination.
3. The general development of the child in relation to the school environment and to all other factors affecting growth and development.

We found that on the whole the physical training in the various schools was not producing a sufficiently high standard of physical ability. The children showed the lack of expert training in all branches of gymnastics, educational, remedial and recreational.

The main defects of the *Physical Exercise classwork* are shown in the Analysis of Physical Exercises, Chart B,* and may be summarized as follows:

* See p. 312.

1. Lack of purposive and educative movements, e.g., exercises taken as an end in themselves.
2. Lack of enjoyment, vigour and initiative in many cases.
3. Lack of balanced muscular development usually—
   Neglect of abdominal movements,
   balance movements,
   spring and footwork,
   movements for co-ordination.
   Over-development, relatively, of back muscles,
   shoulder muscles.
   (e.g. Fig. 1, p. 278.)
4. Lack of training of postural sense.
5. Inadequate recognition of form and style.
   (Good correction of movements was rare.)
6. Insufficient realization of the purposive value of apparatus work.
   (Apparatus too often used as separate and detached work of unbalanced and unrelated character.)
7. Use of unsuitable exercises in general class work, usually either too remedial in character or requiring a too advanced muscle sense. Figs. 2, 3.
8. Use of an artificial "attention posture." Feet and knees wedged together, toes turned out, chest rigid, back arched, shoulder stiff.
   Note.—In schools where the foot angle was exaggerated the sub-astragaloid or ankle weakness was markedly greater. Fig. 4.

In connection with these defects of teaching, it has to be recognized that the untrained teacher is necessarily very greatly hampered by his lack of the most elementary knowledge of human anatomy. He is, for example, ignorant of facts of fundamental importance, such as—

1. The main lines of the human body.
2. Normal joint mobility, Fig. 5.
3. The function of the various muscle groups in relation to each other.
   The untrained teacher cannot be expected to possess the " X-Ray eye " which detects faulty movement in clothed children.

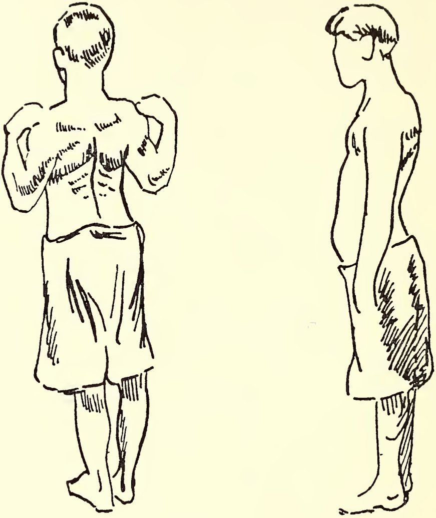


Fig. 1.

(i) *Exaggerated " Arms bending upwards."*

Showing :
- Over-developed shoulders and arms.
- Over-arched back.
- Increasing tendency to round-hollow back (kypho-lordosis).

(ii) *Profile of Same Boy.*

Showing :
- Weak abdominal muscles.
- Flat chest.
- Bulky shoulders.
- Round-hollow back.

Note.—This is a good exercise, taken too often and incorrectly.

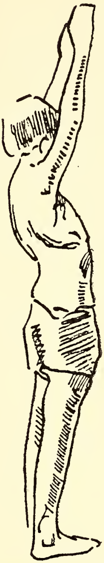


Fig. 2.—"*Arms upward position*" as usually seen.

Showing :
  Backward tilt at waist.
  Round shoulders.
Increasing tendency to :
  Round-hollow back (long kyphosis with pelvic tilt).
  Round shoulders.

Note.—This exercise requires good muscle sense and mobile shoulder joints. It is better taken with arms wider apart.

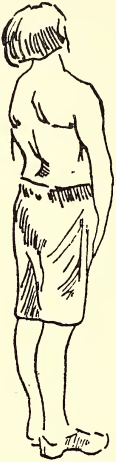


FIG. 3.

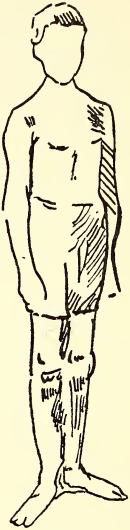


FIG. 4.

FIG. 3.—"*Hands on thighs, head backwards pressing,*" as usually seen.

Note.—This exercise should be discontinued.

FIG. 4.—"*Attention position,*" feet and knees wedged together.

Showing :

Weak ankle position causing sub-astragaloid weakness and flat foot.

Note.—This boy has slight knock-knees and is therefore obliged to place one knee in front of the other in order to make his heels touch.

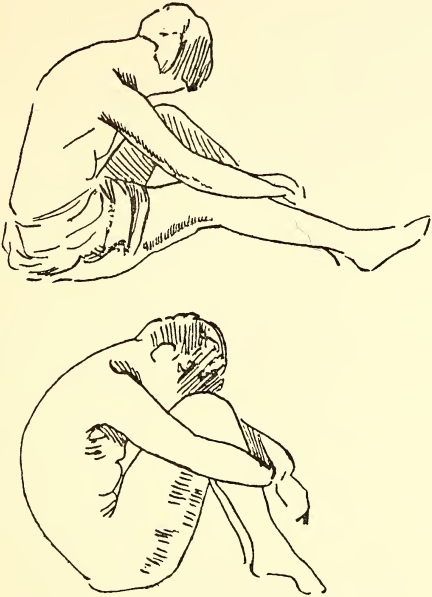


FIG. 5.—*Contrasts in mobility of the Spine.*

(top). Sketch of a blind girl with local rigidity associated with faulty physical training and bad desk posture.

(bottom). Normal Mobility of the Spine, showing perfect curve with movement in all joints. (Drawing from " Figure d'étude " by Flandrin.)

In addition to these drawbacks, the teacher of blind children is frequently led to adopt a lower standard of normality through lack of experience with sighted children. This may probably partly account for the general failure to notice or correct faulty postures, particularly crooked head positions.

General Activities.

These would include free and organized recreational activities and elementary dancing. We found these activities varied greatly in different schools. In many cases advantage was taken of environmental opportunities, as swimming baths, boating, etc. Supervised and assisted free games seemed sometimes better than organized games, as, for instance, general ball catching might include more children than an attempt at cricket or net-ball. But where the Staff is able to coach organized games these are certainly valuable in addition.

Sports were a great feature in some schools and these are valuable, particularly in promoting self-respect, provided all overstrain is avoided. In many schools, however, the free activity was insufficient and even walks a rare feature.

With regard to trainees, there was a lack of sufficient activity; it was found that all sports and games were often dropped when the regular school life ended.

Most schools had some form of elementary dancing, country, ballroom or fancy. On the whole enough attention was not paid to the educative value of accurate footwork, rhythm and expression. The growth and functional development of the children was considered at the orthopædic examination, and we now give our comments on the result of our inspection. It was not possible in the time to examine all the children. Therefore, a rough selection and grading was made after each class and those with obviously poor posture or orthopædic deformities were chosen for a more thorough examination. At this examination, which was held separately after all class work had been seen, we had in mind the following considerations:

(*a*) How far these children deviated from a healthy normality.

(*b*) How far these deviations could be related to environmental conditions and to the type of physical training seen.

Individual Examination of Children.

In picturing "normality" we considered good poise due to balance of all chief muscle groups and to good muscle tone, good joint and spinal mobility and healthy general appearance.

Our procedure with regard to the examination of individual children, therefore, in the stripped child, was to test chest expansion, spinal mobility, relative strength of chief muscle groups, carriage of head and condition of feet and knees; to note the postural sense as shown by the child's self-correction and, further, to discover any actual orthopædic defects.

We came to the following conclusions:

Generally speaking, *the stance* was poor, due in some cases to lax muscle tone, but more frequently to faulty desk posture or uneven development of the chief muscle groups. The *postural sense* was also poor as shown by inaccurate self-correction. The *general mobility* was fair throughout, even in those myopes who refrain from any deep trunk flexion. The muscle tone was very variable. In connection with this, we suggest that the importance of diet and open-air activity is not sufficiently recognized.

Coming now to greater detail we found as follows: (See Chart A, p. 310)

Carriage of Head.

This is a real difficulty in blind children, especially if there is partial sight in one eye, and awkward poking or crooked holding of the head is directly connected with their disability. In most cases this tendency was left uncorrected.

Shoulders.

These were found stooping or uneven in relation often to desks or work machines, or the muscles were relatively over-developed, raising the shoulders to an artificial position often in connection with unbalanced physical training. From the same cause the actual shoulder joint was often held stiff and inwardly rotated.

Backs.

On the whole these were unsatisfactory, though there were comparatively few marked structural deformities. Either the spine presented the long weak kypho-lordosis frequent in lax-postured children, or it was lordotic due to relatively weak abdominal muscles. A frequent finding was patches of local spinal rigidity due to over-contraction produced by exaggerated gymnastic positions.

Knees.

A rather high proportion of knock-knee was found, and where not due directly to any faulty skeletal growth this might often be traced to insufficient muscle training or a habitual laxity of stance.

Ankles.

A large proportion of lax ankle joints was found, and in some cases this could be directly connected with an exaggerated foot angle taught in the gymnasium, though nutrition, activity and footwear were also important factors.

Feet.

A fair proportion of flat feet was found, again related to muscular laxity, and in certain schools there were many cases of cramped toes and enlarged toe joints, caused by short or badly shaped shoes.

Chests.

On the whole the chest capacity was not well developed. This seemed related to desk posture and to poor general activity. Where the respiration had been attended to, the chest expansion was often forced and artificial.

Abdominal and Waist Muscles.

These were markedly weak throughout, especially in the girls. An exception was found only in the one gymnastic class which paid adequate attention to this group of muscles.

Note.—During this examination we referred to the School Medical History and Records Department. These were, in many cases, excellent; but we suggest more use could be made of the facts recorded, for example, the relationship of height to weight and the improvement or otherwise of deformities.

The results of the orthopædic examination revealed, on the whole, an unsatisfactory condition. It was realized that the results were disappointing in relation to the time and energy expended.

This is made evident by a study of the Analysis of Orthopædic Defects, Chart A, which shows that the prevalence of faulty posture, the forerunner of most orthopædic defects, was as high as 89 per cent. An inquiry recently amongst sighted school children in America and England gave the proportion as 80 per cent. and 75 per cent. respectively.

As a result of our findings at this inquiry we should like to submit for consideration the following recommendations:

Recommendations

1. *Suggestions for Physical Training of Juniors*

Our findings at the orthopædic examination have led us to suggest the following safeguards:

1. The use of accurate and simple fundamental movements for all parts of the body, with a minimum time spent on numbering and formations.
2. More change and progression of tables and greater variation of exercises.
3. Fuller recognition that the aim for a good general posture should be the basis of all exercise work.
4. More use of free exercises and simple apparatus and less use of formal, free standing exercises.
5. More use of word pictures for younger children, to give play to imagination and purpose to movement.
6. More use of team work with team leaders for older children to encourage self-confidence and initiative.
7. Less use of exercises requiring an advanced muscle sense, and the exclusion of any type of exaggerated arch flexion.
8. Avoidance of any movement of a purely remedial nature in classwork.
9. A greater use of all general activities, such as country dancing, free walks and rambles, swimming, athletic sports, rowing, etc.
10. More use of activities which help to relate the culture of the mind with the culture of the body, as, for example, dramatic work, Eisteddfods, etc.

2. *Suggestions for Physical Training of Myopes*

There is great diversity concerning the treatment of myopes. In some schools they fit in with the ordinary physical training, in others, few or many movements are omitted. Those most experienced suggest that it is most important to guard against all strong jarring movements or those which cause increased tension, for example, sudden cross-leg sitting, jump to cross-bench sitting, any strong or heavy jumps, hard landings after vaults, heavy running on the spot, exaggerated trunk flexions, etc. All myopes should wear gymnasium shoes for physical exercise, especially when taken out of doors on asphalt or concrete playgrounds.

3. *Suggestions for Physical Education of Seniors*

Amongst the great variation found in work and recreational conditions for trainees it was noticeable that certain good features could, with advantage, be generally adopted.

Work.

1. Fresh air breaks during work hours and at lunch time.
2. Singing in Workshops.
   Note.—A workshop Eisteddfod might be instituted.
3. The teaching of the best possible posture for each machine or occupation.

Recreational Activities.

Some form of activity should be continued as walking, games, voluntary gymnastic classes, rowing, swimming, guides, camping, etc. And, in addition, such social activities as clubs, dancing, continuation classes, debates, dramatic and musical societies should be encouraged.

4. *Suggestions re Environment, Discipline, etc.*

Food.

Food should, in all cases, be as varied as possible and should include plenty of greens, some fresh fruit and sufficient milk. It should not err on the starchy and heavy side, as these children even with planned activities do not get the normal amount of running about of the average school child. We would urge that meals be a part of the social education, eaten with the usual knives and forks, and without bibs, and that leisure and conversation be encouraged. The indispensable relationship between weight and height should be noted.

Clothing.

This should be as little, as light and as simple as possible, and care taken that shoes should not be outgrown and elastics not too tight. A change to indoor heeled shoes is good where possible.

Ventilation and Sunlight.

These are, of course, very essential factors, and where classes can be taken out of doors so much the better. It should be more generally realized that no classroom should be without sun.

Cleanliness.

In day schools a plan adopted successfully by one could be copied with advantage by all, namely, shower baths.

Discipline.

It is felt that with modern forms of education, corporal punishment, or indeed any punishment which degrades and discourages the child, should not be needed. Sending senior boys to bed early, for example, is only asking for trouble.

Activity and Rest Periods.

The children seem to do better when the day's work is frequently broken by short active pauses.

Personal Belongings.

It is felt that personal responsibility is developed by care of reasonable personal possessions, and amongst the older children a promotion might be made to the use of smaller rooms instead of the large bare dormitories. These might be kept in order by the children themselves. This training would obviate the complaint too frequently heard that workshop boys and girls ruin the furniture of a good hostel.

5. *More General Proposals*

A general survey of the conditions affecting the physical development of the pupils in the schools visited reveals three outstanding features:

1. The adverse effect of unsuitable school furniture.
2. The adverse effect of unsuitable physical training.
3. The adverse effect of neglected orthopædic defects.

These three factors emphasize the necessity for more expert knowledge, and we cannot too strongly urge the desirability of every school appointing a fully trained gymnastic teacher to work in conjunction with the school staff.

We also consider that the schools would greatly benefit if in addition some facilities for specialized training could be arranged for those teachers who have at the present time charge of the physical care of their pupils. For this purpose we suggest the institution of a Summer Course under the auspices of the College of Teachers of the Blind. Such a Course should include lectures on child growth and development, applied school hygiene, theory of movement, and practical experience with blind children in gymnastics, dancing and school remedial work. Although it is made clear by glancing at the table of orthopædic defects that a happy environment and sufficient activity may outweigh the value of a well-equipped gymnasium, yet it is certain that good apparatus is a very valuable aid in developing the self-confidence, courage and interest of the blind child. Very little apparatus work, however, can safely be undertaken by partially trained or untrained teachers, and this again emphasizes the importance of appointing fully trained experts.

Remedial exercises were definitely attempted at three of the visited schools by the school gymnastic instructors or class teacher. The children were taken in a class, fully clothed, and, therefore, any accurate correction was impossible. We feel very strongly that remedial exercises should only be given by a fully qualified gymnastic teacher, and that when undertaken, special arrangements should be made for suitable clothing and individual treatment.

In summing up, we feel that the appointment of fully trained gymnastic teachers with additional specialized training will best meet the needs of these schools, but we would recommend, in addition, more reliance on open air, free activity, and good school furniture, particularly in those cases where a trained teacher is not available.

It may be asked whether we recommend any particular text-book of exercises or contemplate the preparation of a code for blind children. The answer is that for the present we prefer that the matter be left in abeyance. With further experience and with the knowledge that will be gained from the working of the proposed Summer School it may, one day, be considered feasible and desirable to prepare a handbook of this kind—a syllabus of physical training, specially adapted to the needs of blind children; but, in our opinion, the time for such a compilation is not yet ripe.

One last word: in case the thought may cross the mind of any member of the Committee that we have taken an unduly wide view of our terms of reference, that we have stepped rather far outside the walls of the gymnasium, we would repeat our fundamental postulate. Physical education must take cognizance of every influence that makes for healthy growth. It can only be successfully attained where there is complete and instructed co-operation among all members of the staff—physical, household, medical and scholastic. It must stipulate for external influences of beautiful surroundings, sunshine, fresh air, and a happy and stimulating mental environment.

Its comprehensive nature has been finely put by Mr. L. P. Jacks, and with his cogent words on this subject we close our Report.

> "The great and fundamental question of correlating the culture of the body with the culture of the mind . . . how to provide the body with a liberal education for the normal activities, teaching it to perform all these with the minimum of effort, strain and fatigue, and with the maximum of dignity, self-control and power of adaptation to changing conditions . . . The two cultures of mind and body would thus be brought into a relation of mutual support and a basis laid in the culture of the body for that creative thinking which is the highest mark of an educated human being.
>
> "To educate a man or child you must get round him in his entirety, mind and body, soul and character all regarded as one inseparable unity."

b. *Reports on Individual Schools*

SCHOOL Q

An unexpected visit was paid to this school and, consequently, it was not possible to give the children an orthopædic examination. It was evident, however, that the physical education was carefully considered in all its aspects and everything seemed to combine to give the child a chance of healthy development. The school stands on a hill and is surrounded by grass meadows. It is so built that all classrooms are open one side to fresh air, sunlight and view. Shower baths are provided by the Local Authorities as are also additional milk and excellent meals. Advantage is also taken of the town facilities, such as swimming baths, etc.

Set physical exercises form only a small part of the general physical education, but good value was obtained from the comparatively simple exercises given.

Some attempt is being made to deal with bad desk postures, but it is probable that an orthopædic examination would have revealed a certain number of slack shoulder positions connected with faulty desk posture and, possibly, also a rather high percentage of weak ankles due partly to unsuitable shoes.

The appointment of a specialist teacher would give accuracy to the physical exercise work and would help to prevent the development of defects through neglect in the early stages.

This school, however, is particularly fortunate in possessing all that makes for healthy childhood ; a happy and beautiful environment, space, sunny classrooms (opening on to a concrete terrace), shower baths, gardens, trees for climbing, quite good school furniture, modern educational methods, and a wide school discipline.

SCHOOL R

PHYSICAL EDUCATION INQUIRY 1932

31 children seen—A2, B25, C4

Orthopædic Examination of 21 children

Analysis of Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
19	Back.	Scoliosis. Long kyphosis. Low short lordosis.	Badly constructed desks. Adapted desks for myopes. Faulty exercise—"Arms forward upward swing, forwards downward swing to touch floor."
18	Posture.	Slight lordosis. Weight on heels.	Faulty idea of good posture.
14	Shoulders.	One shoulder higher (usually left). Inwardly rotated.	Adapted myope desk. Artificial attention position.
10	Ankles.	Sub-astragaloid weakness.	Insufficient activity. Small yard as playground. Faulty nutrition.
8	Muscular development.	Weak abdominal muscles.	Lack of sufficient abdominal exercises.
6	Head.	Poking. Crooked.	Not a discouraged droop. Due to unequal sight mainly.
5	Knees.	Knock-knees.	—
2	Chest.	Rickets (very few).	Breathing exercises taught, fewer defects.
2	Feet.	Flat (very few).	—

SCHOOL R

31 children seen. 21 individually examined

Grades : A2, B25, C4

General Report

The physical education of this day school is necessarily affected by lack of playgrounds, but at the same time the children have the advantage of a large sunny hall and a home atmosphere. The happy relationship between the children and the staff is reflected in a better head posture and more alert bearing amongst the majority of the children.

The orthopædic examination revealed many cases of back defects, mainly of two types, either a scoliosis with rotation and high shoulder associated with unsuitable myope desks, or a long kyphosis with low lordosis associated with one of the chief exercises shown in the physical exercise table, "standing, arms forwards, upwards and forwards, downwards swinging to touch ground " (Fig. 2, page 279). Attention had been given to breathing and the chest mobility was good on the whole, although the chest shape was frequently flat.

As a form of enjoyable general activity, the physical exercise work was satisfactory, the children worked keenly and with intelligence, and the teachers' manners were pleasant and stimulating, but from the standpoint of physical training more expert knowledge and better age grading was very necessary. Some children were untidy, and it was felt that personal cleanliness and hygiene should be included in the school teaching. The installation of a shower bath would do much to help in this respect.

The appointment of a part-time specialist teacher and careful attention to desk posture would greatly improve the health and physique of the children.

SCHOOL S

Physical Education Inquiry 1932

69 children seen—A6, B55, C6, D2

Orthopædic Examination of 43 children

Analysis of Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
40	Posture.	Stiff shoulders. Prominent abdomen. Turned-out toes.	Too much "shoulder back" correction. Adapted desks for myopes causing twisted posture. Lack of postural training.
38	Backs.	Many with slight structural Scoliosis. Some Kyphosis and Lordosis.	Unsuitable desks Faulty physical training.
17	Ankles.	Sub-astragaloid weakness.	Too frequent use of gymnasium shoes. Turned-out foot position.
13	Chest.	Rickets. Torsion associated with curvature. Flat.	Poor chest shape (owing to bad posture) but good chest expansion.
12	Shoulders.	Uneven ; one shoulder higher, usually right.	Adapted desk for myopes, causing shoulder twist.
12	Knees.	Knock-knees.	Lack of postural training.
10	Muscular development.	Mainly over-developed shoulder muscles.	Faulty physical training.
9	Head.	Crooked. Poking.	Bad desk posture counteracted by happy home atmosphere.
3	Feet.	Flat.	

SCHOOL S

69 children seen. 43 individually examined

Grades : A6, B55, C6, D2

General Report

The physical education in this school is too departmental. The general health of the children seems good, but the posture and growth is in many cases unsatisfactory, particularly amongst the senior boys. There is a happy, friendly atmosphere in the school which is reflected in the good head carriage noticeable amongst the majority of the children.

The effects of the various systems of physical training and of the badly constructed school furniture were well shown at the orthopædic examination. The senior boys had a slack stance with weak ankles aggravated by an exaggerated turned-out foot position, whilst many of the myopes had a definite type of spinal curvature corresponding to the tiring twisted position necessitated in the use of adapted desks.

With the exception of the senior girls, the muscular development lacked balance, the muscles of the leg and abdomen being relatively weak.

The senior girls had an upright, alert bearing and good muscle tone, but the prevalence of slight curvature with rotation amongst the myopes proved that the twisted desk posture was more effective than the very good work done by the senior mistress. The chest mobility was satisfactory on the whole, although the chest shape was frequently flat.

Many of the senior boys had bulky over-developed shoulders which might be associated with the special apparatus class and with club swinging.

A specialist teacher working in co-operation with the School Authorities and assisted by the Senior Mistress and a Senior Class Master would be able greatly to improve the physique of the children.

SCHOOL T

Physical Education Inquiry 1932

98 children seen—A13, B79, C4, D2
Orthopædic Examination of 60 children

Analysis of Chief Defects

No.	Defects of.	Type of Defect.	Some Associated Factors.
55	Posture.	Stooping posture. Round back. Prominent abdomen. Over-arched back (senior boys).	Prolonged stooping at desks and benches. Faulty physical training.
33	Backs.	Clumsy misshapen backs. Kyphosis } Postural Lordosis } and Scoliosis } Structural	Badly constructed desks. Benches without backs. Faulty physical training.
24	Chests.	Flat and sunken.	Stooping sitting posture. Faulty physical training.
20	Muscular development.	Lack of muscle balance. Over-developed shoulder muscles. Weak abdominal muscles. Poor muscle tone.	Faulty physical training. Insufficient activity.
17	Shoulders.	Uneven. High.	Bad desk posture. Faulty physical training.
16	Head.	Poking. Crooked.	Bad desk posture. Faulty physical training. Lack of conscious co-operation in school life.
6	Feet.	Very few flat or cramped toes.	Strong untrained feet. Good shoe supervision. Good food and air.
4	Knees.	Very few knock-knees.	Good food and air.
–	Ankles.	—	Good shoe supervision. Good food and air.

SCHOOL T

98 children seen. 60 individually examined

Grades : A13, B79, C4, D2

General Report

The physical education is not incorporated into the whole life of the school, though some departments, particularly those affecting food, clothing and general hygiene, are very efficiently organized. The general health of the children appears quite good, but the posture and growth is unsatisfactory ; the senior girls in particular seem lethargic and unawakened.

The results of the orthopædic examination showed that the influence of environmental conditions was greater than the effects of the physical exercises ; the feet and ankles, for example, were quite exceptionally strong though untrained, showing the result of good nourishment, good air and well-supervised footwear ; the backs on the other hand were, for the most part, round and weak and the chests flat and immobile, showing the effect of badly constructed desks and seats without backs. A better muscle tone was observed amongst the senior boys, but there was a very noticeable lack of muscle balance, the shoulder muscles being too large and bulky in proportion to the rest of the musculature.

The physical training of the children loses through lack of co-operation between the visiting and class teachers, and even the specialist visiting teacher would get better results if she were more aware of the effects produced by the school environment ; for example, a definite Swedish system is more suitable under present conditions than the modern rhythmic Scandinavian work.

This school would greatly benefit by the appointment of a specialist physical training teacher, but no satisfactory result can be obtained until the school furniture is altered.

SCHOOL U

Physical Education Inquiry 1932

84 children seen—A3, B69, C7, D5

Orthopædic Examination of 49 children

Analysis of Chief Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
44	Posture.	Flat chest. Prominent abdomen. Bent knees. Turned-out toes.	Unsuitable exercises. Lack of posture training. Faulty desk postures.
33	Back.	Kyphosis Lordosis } Postural and Structural Scoliosis Local rigidity.	Desks too high. Handicraft furniture harmful. Unsuitable exercises. Lack of posture training.
19	Shoulders.	Uneven, one shoulder higher. Inwardly rotated.	Bad desk posture. Artificial "attention" posture. Unsuitable exercises.
19	Chest.	Shallow breathing.	Lack of training in some classes.
16	Head.	Poking. Crooked.	Lack of training. Bad desk posture.
16	Muscular development.	Lack of balance. Abdominal muscles weak. Shoulder muscles relatively too strong.	Faulty exercise tables. Wrong idea of good posture. "Shoulder back" correction.
10	Feet.	Flat. Cramped toes.	Good playing field. Good sports. Good running tracks. *Note.*—The result would be better still if the training in the gymnasium were equally satisfactory.
9	Knees.	Postural knock-knees.	
5	Ankles.	Sub-astragaloid weakness.	

SCHOOL U

84 children seen. 49 individually examined

Grades: A3, B69, C7, D5

General Report

This School impresses one as possessing great individuality, with a strong life and vigour of its own. It can be recognized as an experimental school capable of growth and development. The importance of physical education is recognized, but more expert knowledge is needed on all sides. The children were well nourished, and such everyday movements as running, jumping and skipping were unusually good, though the general posture, particularly the classroom posture, was unsatisfactory.

The orthopædic examination showed some defects directly due to faulty physical training, noticeably inwardly rotated shoulders and local rigidity of the spine, both of which might be associated with particular exercises and faulty posture correction.

The furniture of the handicraft room was unsuitable (see Fig. 15, page 324) and was likely to increase a tendency to the stooping habit noticeable amongst some of the older children.

The appointment of a specialist physical training teacher is strongly recommended for the ordinary physical training and particularly for preventive remedial work and posture supervision. With this addition to the very favourable conditions already existing it seems probable that a very high standard of efficiency might be attained.

SCHOOL V

Physical Education Inquiry 1932

81 children seen—A21, B52, C7, D1

Orthopædic Examination of 51 children

Analysis of Chief Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
35	Posture.	Weight on heels. Over-arched back. Knees bent.	Faulty postural training. Too much "shoulders back" correction.
30	Back.	Long postural Kyphosis. Lordosis. Very little structural deformity.	Badly constructed and unsuitable desks. Deformity prevented from becoming structural by good general activity.
18	Chest.	Rickety deformities mainly.	Good activity. Bad desk posture. Early neglect.
15	Knees.	Knock-knees.	Faulty posture correction.
11	Shoulders.	Uneven.	Connected with lateral curvature.
10	Head.	Crooked. Some poking.	Uneven vision, not the discouraged droop.
9	Ankles.	Sub-astragaloid weakness.	Exaggerated foot angle in some classes.
9	Muscular development.	Relatively over-developed shoulder muscle.	Shoulder back correction. Relatively too many shoulder movements.
9	Feet.	Flat feet. Cramped toes.	Relatively few, owing to greater activity and more foot exercises.

SCHOOL V

81 children seen. 51 individually examined

Grades: A21, B52, C7, D1

GENERAL REPORT

The importance of physical education in its fullest significance is well recognized in this school, and a good attempt is made to deal with all factors affecting physical development. There was, in fact, evidence in every branch of careful thought and attention, although expert advice is certainly needed.

A report had already been made by the local physical training organizer, and various alterations and adjustments suggested.

The orthopædic examination revealed many cases of round back which might be associated with unsuitable and ill-fitting desks. There was also a rather large proportion of knock-knees associated with a faulty idea of posture correction, the chief mistake being a tendency to produce an artificial holding of shoulders and chest rather than a firm, erect stance affecting all the muscles and joints, knees included.

The physical exercise work was careful, thorough and effective in its results on the muscle tone and development of the majority of the children. This was also demonstrated by the vigour and activity shown in the playground during free play at the recess period. Some attempt was made to deal with nervous and retarded children by taking them as a separate class, but owing to the great variation of age the factor of interest had to be neglected and, consequently, very little benefit resulted.

The appointment of a physical training expert would greatly benefit the children, particularly as full co-operation and understanding could be ensured on the part of the School Authorities.

SCHOOL W

Physical Education Inquiry 1932

41 children seen—A2, B36, C2, D1

Orthopædic Examination of 25 children

Analysis of Chief Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
22	Posture.	Ligamentous stance (knees bent, toes turned out, lax shoulders). Over-arched back.	Lack of vitality. Children look anæmic. Senior boys taught artificial "military" stance.
13	Head.	Poking. Crooked.	Lack of posture training. Lack of independence and vitality.
12	Back.	Lordosis. Kyphosis Scoliosis Good mobility.	Lack of good muscle tone. Insufficient activity. Untrained teachers.
12	Shoulders.	Chiefly round or winged.	Associated with generally lax stance.
10	Knees.	Knock-knees.	Insufficient activity. Poor muscle tone and lax joints. *Note* 1.—Playing-fields have lately been added and the leg musculature should therefore improve. *Note* 2.—The senior boys had practised abdominal exercises with good results. Weak feet affected by turned-out foot position.
9	Ankles.	Sub-astragaloid weakness.	
8	Muscular development.	Lack of balance. Chiefly weak abdominal muscles. Poor muscle tone.	
8	Feet.	Chiefly flat feet with poor muscle tone.	
7	Chest.	Flat chest and shallow breathing (a few cases only).	Chest expansion on the whole good.

SCHOOL W

41 children seen. 25 individually examined

Grades : A2, B36, C2, D1

General Report

Careful thought has been given to the physical education in this school, but the results are disappointing. Many of the children appear lacking in vigour and vitality, and it is evident that more expert knowledge of child growth and development is desirable. The buildings are old-fashioned and cramped for space, but the recent acquisition of a playing field will now enable the children to enjoy more game activity.

The orthopædic examination showed that many children were lax jointed and lacking in good muscle tone. Owing to this condition there was a larger proportion of leg defects, knock-knees, weak ankles, flat feet than was found in other visited schools. Many children also looked pale and tired and appeared anæmic.

The physical exercises shown by the class teachers were carefully taught, but the results were on the whole ineffective, and as in addition no posture training was given, it is probable that the children would have derived more benefit from free and vigorous game activity.

The work shown by the senior boys under the direction of the sergeant was thorough and intelligent and more effective in producing good muscle tone and stance, although a too artificial holding was adopted.

In connection with the general school hygiene, it seems unfortunate that a dark underground basement room should have been chosen as a dining-hall, and that no provision is made for good recreation rooms.

It is certain that the children would greatly benefit by the appointment of a fully trained gymnastic mistress, assisted by the sergeant for the senior boys.

SCHOOL X

Physical Education Inquiry 1932

43 children seen—A6, B28, C9

Orthopædic Examination of 31 children

Analysis of Chief Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
28	Back.	Structural and Postural Scoliosis. Postural lordosis. Local spinal rigidity.	Poverty. Rickets. Constant practice of unsuitable exercise. (Hands on thighs, head back pressing—Fig. 3, p. 280).
26	Posture.	Over-arched back.	A good head-and-shoulder position was taught, but the attention posture was taken with weight on heels and arched back.
12	Feet.	Chiefly contracted or cramped toes.	Short cheap shoes.
12	Chest.	Rickety deformities. Scoliotic deformities.	Good chest expansion aided by good general activity and a good head carriage.
7	Muscular development.	Weak abdominal muscles.	Lack of abdominal exercises in tables shown.
5	Head.	Poking. Crooked.	The head-and-shoulder position was unusually good and might be associated with the good general activity and happy school atmosphere.
5	Shoulders.	Lax or winged.	
2	Knees.	Knock-knees.	These children had strong legs and good muscles associated with greater freedom and more activity.
2	Ankles.	Sub-astragaloid weakness.	

SCHOOL X

43 children seen. 31 individually examined

Grades : A6, B28, C9

GENERAL REPORT

The children in this school appear to lead a natural healthy and active life mentally and physically. The influence of a wider social outlook, greater general activity and an easy discipline was expressed by the good head-and-shoulder carriage and by the erect and confident bearing of the majority of the children.

The orthopædic examination revealed several cases of serious structural defects, but these were usually related to bad heredity or early neglect, and were not directly connected with faulty school conditions. There were, however, several children with local spinal rigidity which was probably caused by the special exercise given in all School classes, " hands on thighs, head back pressing " (Fig. 3, page 280). The feet and ankles were strong, but some children had cramped toes caused by too short shoes. The chest expansion was good, though there were several cases of chest deformities associated with rickets and structural scoliosis.

Physical training in the form of set exercises was a relatively unimportant feature in this school. More reliance was placed on general activity in the form of free play, games and dancing, and on good school hygiene. Tables and chairs were used in most of the rooms instead of desks, and the importance of good posture was recognized.

SCHOOL Y

Physical Education Inquiry 1932

97 children seen—A17, B74, C6
Orthopædic Examination of 35 children

Analysis of Chief Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
28	Posture.	Faulty Posture. (Weight on heels, arched back, turned-out feet.) Fatigue posture.	Faulty idea of good position. Overstrain.
26	Feet.	Flat. Cramped toes. Hammer toes. Enlarged toe joints.	Turned-out foot position. Short, badly-shaped shoes.
23	Back.	Scoliosis, Lordosis, Kyphosis } Structural and Postural. Local spine rigidity.	Fatigue (long school hours). Faulty "attention" position.
16	Ankles.	Sub-astragaloid weakness. Lax joints.	Turned-out foot position. Unsuitable footwear. Fatigue. (*Note.*—38 children showed this defect.)
14	Shoulders.	One shoulder higher; related to the Lateral Curvature.	School-room posture. Fatigue.
9	Chest.	Artificial holding (but expansion good).	Faulty idea of good posture.
8	Muscles.	Lack of muscle-balance. Over-developed back and shoulder muscles.	Faulty idea of good posture. ("Shoulders back" correction.)
7	Knees.	Knock-knees.	—
7	Head.	Poking.	Fatigue posture.

SCHOOL Y

97 children seen. 35 individually examined
Grades: A17, B74, C6

GENERAL REPORT

The physical education is taken seriously in this school, but the result as shown by the physique of the children is disappointing. It may be said, however, that the standard of muscular skill and ability amongst the senior pupils was higher here than in any other visited school. The most common defects observed throughout were over-arched back, lax ankle joints and cramped toes, due partly to the exaggerated military stance with turned-out toes taught in the gymnasium and partly to unsuitable footwear. There was also a high proportion of marked postural and structural curvature, usually associated with overwork, unsuitable school furniture and insufficient leisure. A general atmosphere of "conscientious overstrain" was probably partly responsible for the poor muscle tone and lax joints found amongst some of the pupils.

In connection with the physical training as seen in the gymnasium, the work of the senior pupils was on the whole well adjusted and efficient, but the needs of the younger children were not fully recognized or understood. The work on the Swedish apparatus was unusually good, the vaulting in particular, but the value of the work on the American apparatus was doubtful. It was not sufficiently recognized that such apparatus is more remedial than educational in nature, and that even in this connection it should be used in its right progression and only for so long as it serves its purpose.

This school has many advantages, large halls, spacious playing grounds and a well-equipped gymnasium; it is also fortunate in possessing a keen teacher capable of conscientious and thorough work particularly amongst the senior boys. With the additional help of a trained expert for the girls and younger children and with a modified time-table it is probable that the proportion of children with orthopædic defects would soon considerably lessen and a very high standard of physical development might be obtained.

SCHOOL Z

PHYSICAL EDUCATION INQUIRY 1932

100 children seen—A6, B90, C3, D1

Orthopædic Examination of 64 children

Analysis of Chief Defects

No.	Defects of.	Types of Defect.	Some Associated Factors.
56	Posture.	Lax stance. Arched back.	Faulty physical training. Lack of sufficient activity.
55	Back.	Kyphosis, Lordosis, Scoliosis } Postural and Structural. Local spinal rigidity.	Faulty physical training. Fatigue posture.
26	Feet.	Cramped toes. Enlarged toe joints. Hammer toes. Flat feet.	Short shoes. Lack of sufficient open-air activity. Faulty physical training.
24	Chest.	Flat. Artificial holding. Upper thoracic breathing.	Faulty physical training. Fatigue posture.
23	Shoulder.	Inwardly rotated. Round. Stiff. Uneven.	Faulty physical training. Fatigue posture.
22	Muscular development.	Lack of balance. Over-developed back and shoulder muscles.	Faulty physical training. Too many and too strong arch-flexions.
21	Head.	Crooked. Poking.	Faulty physical training.
20	Ankles.	Sub-astragaloid weakness.	Faulty physical training. Unsuitable shoes. Lack of sunlight and open-air activity.
19	Knees.	Knock-knees.	Faulty physical training. ("Attention" position; feet and knees wedged together.) Lack of sunlight and open-air activity.

SCHOOL Z

100 children seen. 64 individually examined
Grades : A6, B90, C3, D1

GENERAL REPORT

This school has had a great deal of difficult work to encompass in the effort to outgrow the old charity institution traditions, and it has not yet reached the stage of any modern school government. The children do not quite bear that modern stamp of self-respect and self-reliance which is expressed physically in a confident and erect bearing. On the contrary, several appeared repressed and overstrained with a physical development very much below standard.

The orthopædic examination revealed many cases of faulty growth, some of which could be directly related to the unsuitable method of physical training practised in the school. Other contributory causes were ill-fitting footwear, bad ventilation, unsuitable dining-room furniture, insufficient open-air activity and a lack of emotional outlet. The defects most commonly observed were faulty posture, poking heads, over-arched backs, local spinal rigidity, postural and structural curvature of the spine, inwardly rotated and prominent shoulders, knock-knees and weak ankles, all of which could be associated with the work shown in the gymnasium. The chest mobility was on the whole good, but the breathing was faulty and artificial. The physical exercises seen in the gymnasium were, for the most part, quite unsuited to the needs of the growing child. A real effort was made to develop " dash," self-reliance and courage, but it was not sufficiently realized that these qualities cannot be forcibly imposed, and that in fact exercises causing overstrain may, on the contrary, result in discouragement and lack of initiative.

The remedial exercises in particular were likely to produce fatigue and nervous overstrain, and the strong arch flexions given to the younger children should be at once discontinued.

A wider conception of the full meaning of physical education and more expert knowledge of physical training itself is much needed, particularly for the girls and younger children.

CHART A.

GRADE PER CENT. DISTRIBUTION IN VISITED SCHOOLS

	School.									
	Z	Y	X	W	V	U	T	S	R	
Total No. of children seen	100	97	43	41	81	84	98	69	31	Good posture 11 per 100 children.
A	6	17	14	5	26	5	13	9	6	
B	90	77	65	88	64	82	81	80	81	
C	3	6	21	5	9	7	4	9	13	
D	1	–	–	2	1	6	2	2	–	

A	Satisfactory development.
B	Postural and slight structural defects.
C	Structural and marked postural defects.
D	Crippling deformities.

ANALYSIS OF MOST COMMON ORTHOPÆDIC DEFECTS
PER CENT. DISTRIBUTION

	School.									Total.	
	Z	Y	X	W	V	U	T	S	R		
Proportion examined	64	36	72	61	63	58	51	62	67		
HEAD { Crooked Poking	33	20	16	52	20	33	27	21	28		27
SHOULDERS: (High, Uneven, Stiff, Winged)	36	40	16	48	21	39	28	28	67		33
CHEST: (Poor capacity. Limited mobility.)	38	26	39	28	35	39	40	30	10		34
BACK — Postural { Kyphosis Lordosis Scoliosis	36	43	39	24	37	28	35	47	52	37	
BACK — Structural { Kyphosis Lordosis Scoliosis	19	34	26	20	4	14	15	25	24	19	78
BACK — Local rigidity	31	57	26	4	18	24	5	19	14	22	
LEGS: Knock-knees	30	20	6	40	29	18	7	28	24		22
ANKLES: Sub-astragaloid weakness	31	46	6	40	18	10	–	40	48		23
FEET — Flat	11	25	2	28	12	12	3	2	5	11	27
FEET — Cramped Toes Enlarged Joints	30	48	32	4	6	8	7	5	5	16	
MUSCULAR DEVELOPMENT (Muscle Balance) { Weak abdominals Over-developed shoulders	34	23	22	32	18	33	33	23	38		28
POSTURE { Poor stance Postural sense	87	80	84	88	68	90	92	94	86		

CHART A.

SOME ASSOCIATED FACTORS ILLUSTRATED BY CHART

Head.		W	Many children of poor vitality, insufficient activity, mental and physical.
		X	Modern methods, good activity, good desks.
Shoulders.		R	Adapted myope desks, unsuitable height, insufficient activity.
		W	Poor vitality, insufficient activity.
	Z	Y	Overstrain, desk postures, faulty postural correction.
		X	Modern methods, good activity, good desks.
Chest.		T	Very bad desk posture. Desk seats without backs.
		R	Breathing exercises given to all children.
Back.			Large number of postural defects associated with : 1. Bad desk posture. 2. Insufficient activity. 3. Faulty physical training.
		Y	Postural deformities allowed to become structural through overstrain.
		V	Postural deformities attended to, and prevented from becoming structural.
	S	R	Adapted myope desks.
	Z	Y	Local spinal rigidity—faulty physical training.
	T	W	Good mobility exercises shown in tables, lax joints.
Legs.		W	Lax joints, poor muscle tone, insufficient activity.
		U	Good sports and running tracks.
Ankles.	Z	Y	Overstrain, unsuitable shoes, faulty postural training.
	X V	U	Good outdoor activity.
		T	Good shoe supervision, well-balanced diet.
Feet.		Y	Overstrain. Short shoes, faulty postural training.
		X	Cheap shoes of bad shape, causing cramped toes and enlarged joints.
		W	Lax joints, poor vitality, insufficient activity.
Muscular Development.		V	Intelligent, well-balanced physical exercise tables.
Posture all schools.			General lack of training in postural sense. Weak abdominal muscles. " Shoulder back " correction causing over-arched back.
		V	Intelligent physical exercises giving better all-round development.
Note.		Z	A smaller proportion of children were examined in this school; therefore, their proportion of defects appears higher by comparison.

		Z*									Y*							X		
		P M	P M	J M	J M	S M	R M	R M	R B	R B	P M	J G	J B	S G	S B	S B	S M	S M	S M	J M
Activity		f	f	f	f	f	f	f	f	f	–	f	s	s	s	f	f	f	s	s
Balance of Muscle	Head	–	–	f	f	f	–	–	f	–	–	s	s	f	f	s	f	f	f	f
	Shoulder	†	†	†	†	†	‡	‡	‡	‡	†	†	f	f	s	s	†	f	f	s
	Abdominal Lateral	–	–	–	–	f	f	f	f	f	–	–	f	f	f	s	–	f	f	f
	Back	–	†	†	†	†	‡	‡	f	‡	–	–	s	f	s	s	–	f	f	s
	Leg	f	f	f	f	f	f	f	f	–	s	s	s	s	s	s	†	f	f	s
	Arm	f	†	†	†	f	†	†	f	†	s	†	s	s	s	s	†	f	f	s
Posture		–	–	–	–	–	–	–	–	–	–	f	–	–	–	–	–	–	f	f
General mobility		f	f	f	f	f	f	f	f	f	–	–	s	f	s	s	–	f	f	s
Chest mobility		–	–	–	a	a	a	a	–	–	–	–	f	f	f	–	–	f	f	–
Spring		–	–	–	–	f	–	–	f	–	f	f	f	f	s	f	f	f	–	f
Balance		–	–	–	–	–	–	–	–	–	f	f	f	–	f	–	f	–	–	s
Skill		f	f	f	f	f	f	f	f	f	–	f	f	–	f	s	f	–	–	f
Enjoyment		–	–	f	–	f	f	f	f	f	–	f	f	–	s	–	f	–	f	s
Co-ordination		f	–	f	f	–	–	f	f	f	–	f	s	s	s	–	s	–	–	f
Progression		f	–	f	f	–	–	–	f	f	–	f	s	f	s	–	–	–	f	f
Quick response		f	–	f	f	f	f	f	f	f	–	f	f	s	s	f	s	–	f	f
Rhythm		–	–	–	–	–	–	–	–	–	–	–	f	f	f	f	f	–	–	f
Style		–	–	–	–	–	–	–	–	–	–	–	f	–	–	f	f	–	f	f
Age standard		†	–	f	–	–	‡	‡	‡	‡	–	–	f	f	f	s	s	–	f	s

P Infants
J Juniors.
S Seniors.
M Mixed.
B Boys.
G Girls.
R Remedial.

Chart B.

xercise Tables

W			V				U						T*							S*				R	
JB	SG	SB	JM	SG	RM	JB	JB	JB	SG	SB	PM	JG	SB	JB	SB	SG	JM	PM	PM	SB	SG	JM	PM	SM	JM
f	–	s	f	g	–	s	–	–	f	–	f	f	f	–	f	s	–	–	–	–	s	s	f	s	f
f	f	f	–	s	f	f	f	–	f	f	–	–	–	–	f	s	f	f	–	–	s	s	–	f	f
†	f	†	f	s	f	s	f	–	f	–	–	–	f	f	–	s	–	–	–	–	f	–	f	f	f
–	–	s	–	f	f	f	–	–	–	–	–	–	f	f	f	f	–	–	–	–	f	f	–	–	–
f	f	s	–	f	f	s	–	–	–	–	–	–	f	–	–	s	–	–	–	–	f	–	–	f	f
s	s	f	s	s	f	s	f	f	f	f	f	f	f	–	f	s	f	f	–	s	s	s	f	f	s
s	s	s	s	s	f	s	f	f	f	f	f	f	f	–	f	s	–	f	–	s	s	s	f	f	s
f	–	f	f	f	–	f	–	–	–	–	–	–	f	–	–	f	–	–	–	–	s	–	–	f	f
f	f	s	–	f	–	f	–	–	–	–	–	–	f	–	–	s	–	f	f	–	f	f	f	f	f
–	–	f	–	–	f	f	a	a	–	–	–	–	–	–	–	–	–	–	–	–	f	f	–	f	f
s	f	–	f	s	–	s	–	f	f	–	–	–	–	–	–	f	–	–	–	s	f	f	f	f	f
s	s	–	–	s	–	s	–	f	–	f	–	f	f	f	–	s	–	f	–	–	s	f	–	–	–
f	–	f	–	s	–	s	–	–	–	–	–	–	–	–	–	s	–	–	f	f	s	–	–	f	s
f	–	f	–	f	–	s	–	–	f	–	f	f	–	–	–	s	–	–	f	–	s	f	f	–	f
f	–	–	–	s	–	s	–	–	–	–	f	–	–	–	–	f	–	–	–	f	s	f	–	–	f
f	–	f	–	s	–	s	–	–	–	–	–	–	–	–	–	f	–	–	–	f	s	f	–	f	s
f	–	s	–	s	–	s	f	–	f	–	–	f	f	–	f	f	–	–	–	–	s	f	–	–	f
–	–	–	–	–	–	s	–	–	f	–	–	–	–	–	–	s	–	–	–	–	f	–	–	–	f
f	–	f	f	s	–	f	–	–	–	–	–	–	–	–	–	f	–	–	–	f	s	–	–	–	f
–	–	f	–	s	–	s	–	–	–	–	–	–	–	–	–	s	–	–	–	f	s	–	–	–	s

g Good.
s Satisfactory.
f Fair.
– Neglected.
† Over-emphasized.
‡ Much too strong, or Much too advanced.
a Artificial.
* Gymnasium.

c. *School and Workshop Furniture and Equipment*

The effect of work postures on the growth and development of the child or trainee was fully revealed at the orthopædic examination. Certain types of shoulder, back and chest defects could be definitely associated with the use of particular desks or machines. The following connections were most generally noticed :

1. *Desk A.*

Adapted desk for myopes, white paper clipped on upturned lid, causing a tiring twisted posture. Dorsal scoliosis with rotation of spine and twisting of shoulder girdle. Fig. 6.

2. *Desk B.*

Desk seat without back, causing stooping posture. Long kyphosis, flat chest. Fig. 12, Dining-room bench.

3. *Desk C.*

Desk seat narrow with long narrow back, fixed too far from desk. 1″–3″ plus distance, causing a slipped forward poking head posture.

Poking head, upper dorsal kyphosis with stiff back. Figs. 7 and 8.

4. *Desk D.*

Long desk for two or more children causing all types of back defects owing to misfit, the tall child, who is obliged to twist her legs to one side, being more usually affected. Dorso-Lumbar scoliosis with rotation. Fig. 9, Scoliosis.

5. *Desk Misfits.*

Too high, causing high shoulders. Muscularly high shoulders and short neck. Fig. 10.

Too low, causing round back and shoulders. Long kyphosis. Fig. 11.

6. *Benches or seats without backs,* causing round back and shoulders and sunken chest. Weak back musculature, long kyphosis, flat chest. Fig. 12.

7. *Circular kindergarten chairs* with rounded backs.

Too large, causing high shoulders and sagging back. Long kyphosis, muscularly high shoulders and flat chest. Fig. 13.

Too small, causing round back, poking head and flat chest. Long kyphosis, flat chest. Fig. 14.

8. *Handicraft tables, with fitted drawers and high stools.*

Feet dangling, no knee space, causing round back and shoulders, flat chest. Fig. 15.

The harmful effect of unsuitable school furniture is minimized where greater activity, shorter working hours and more variety of physical exercise is given. Interest is also an important factor. There is much truth in the saying "sit up and take notice." It should be recognized, however, that the blind child with his necessarily lessened activity needs every help to maintain a good posture, and it seems probable that the unsuitable school furniture so frequently seen was, in fact, partly responsible for the 89 per cent. bad posture found amongst the children of the visited schools.

It is recommended that the children should be fitted for their desks at regular intervals, and that owing to the great variation of age in the different classrooms the work should be so arranged that it is the teachers and not the children who change rooms for the different subjects.

The chief points in desk fitting are:

Chair, strong, well built, not too heavy.

Height, to allow pupil to sit with thighs horizontal, feet flat on floor.

Seat, front edge rounded, slightly hollowed.

Depth, $\frac{3}{4}$ length of thigh, sufficiently broad.

Chair back, high enough to support lower part of shoulder blade.

Height of Desk, to allow pupil to bring elbows 3″ to 4″ forward from sides to rest on desk, without raising shoulders or rounding back.

Note.—Where desks with attached seats are used it is important that the seat should move forward and backwards.

With regard to workshop training, the importance of a healthy posture should be realized in connection with the education of the trainees, and advice given as to the best possible positions for each trade. By this means the cramped deforming postures, so often adopted and fixed, might be avoided.

It is suggested that some of the following improvements might be adopted :

1. *Circular Knitting.*

Good chairs of varying heights. Machines fitted to tables of varying heights. Trainees taught to sit square to machines, with knees apart, machine weight dangling between knees.

Note.—A stone or concrete floor is too cold for sedentary workers, unless stools or mats are used.

2. *Flat Knitting Machine.*

Long stool or plank for use of shorter pupils.

3. *Brush-making.* Pitch room.

Small wooden footstools for use with high stools.

Note.—This was evidently a felt want as some workers had made their own stools out of odd wood.

4. *Shoe-making.*

Fixture of last by foot strap, rather than by chest pressure. Small tray for nails (not carried in mouth).

5. *Basket-making.*

Tables allowing good knee space (no drawer or ledge). Foot rests or rails for shorter workers.

The round misshapen backs and ugly figures so frequently seen amongst the older men and women in the workshops could surely be prevented if more care were taken whilst the workers are still young so that slight postural defects are not allowed to develop into structural deformities.

d. *Work Postures*

Sketches of Typical Postures observed at Visited Schools

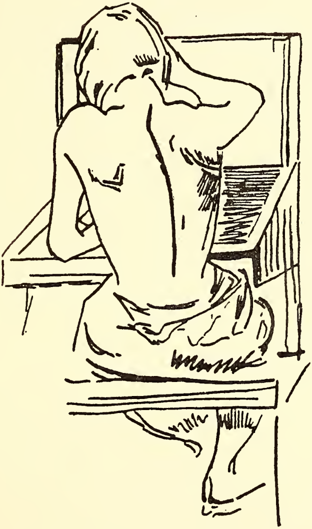


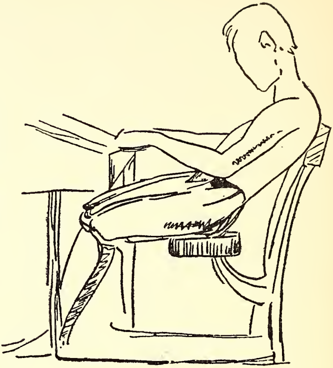
Fig. 6.—*Desk A. Adapted for Myope.*

Child rests elbow on edge of desk and twists forward to reach paper, causing spinal curvature, with prominent and crooked shoulders.

Fig. 7.—*Desk C.*

Small fixed seat, low narrow back. Child slips forward to get better back support, causing:

Upper dorsal kyphosis.
Local spinal rigidity.
Poking head.
Flat chest.



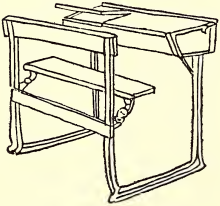
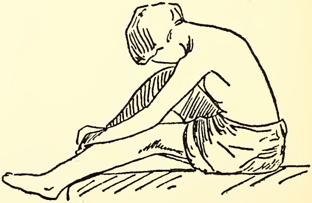
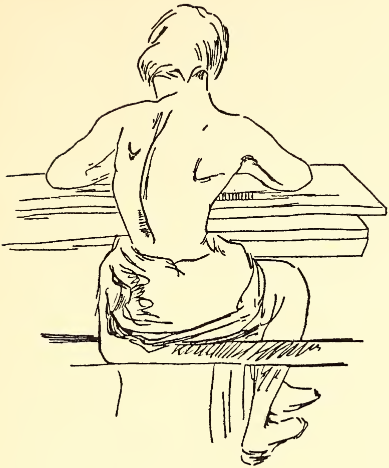


Fig. 8.

Girl showing effect of desk, causing:

Upper dorsal kyphosis.
Local spinal rigidity.





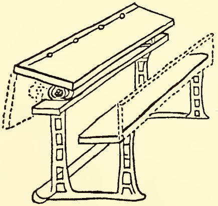


FIG. 9.—*Desk D.*

Long desk for four children. Child has no room for knees, so twists legs to one side, causing spinal curvature.

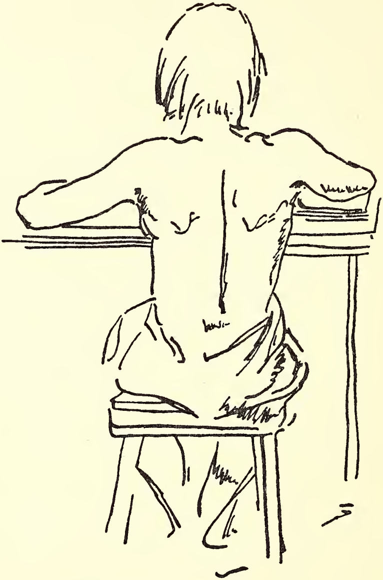


FIG. 10.—*Desk Misfit (too high).*

Child raises elbows to shoulder level, causing:

Raised shoulders.
Shortened shoulder and neck muscles.

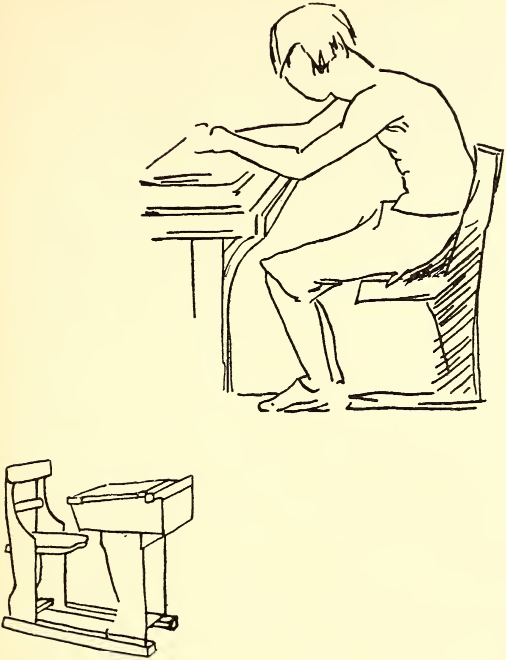


Fig. 11.—*Desk Misfit* (*too low*).

Child rounds back to rest elbows on desk, causing:

Long kyphosis.
Flat chest.
Poking head.

Note.—In this design only the front edge of the seat is used.

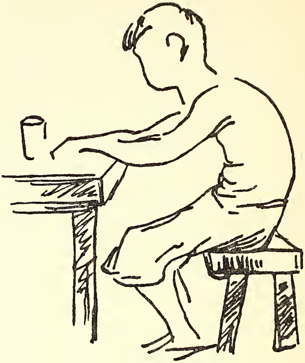


FIG. 12. — *Dining-room Table and Bench.*

Table and bench too low. Bench without back, too far from table. Child rounds back to rest arms on table, causing:

Long kyphosis.
Flat chest.

Note.—A similar position is adopted if the bench is too high.

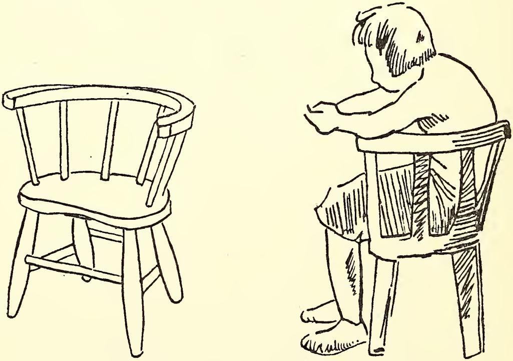


FIG. 13.—*Kindergarten Armchair* (*too large*).

Child rests elbows on sides of chair and sits with sagging back and raised shoulders, causing:

High shoulders.
Poking head.
Flat chest.
Weak back muscles.

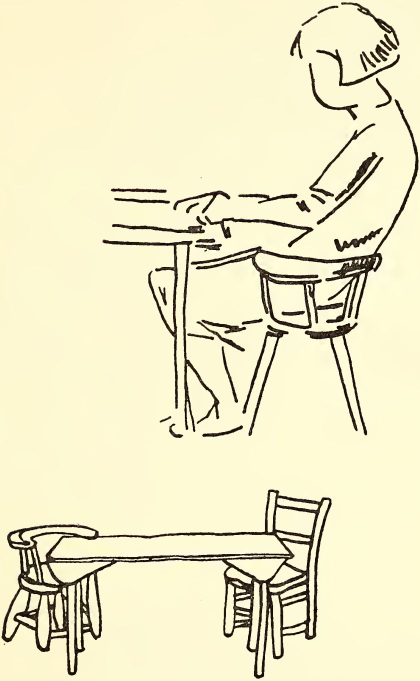
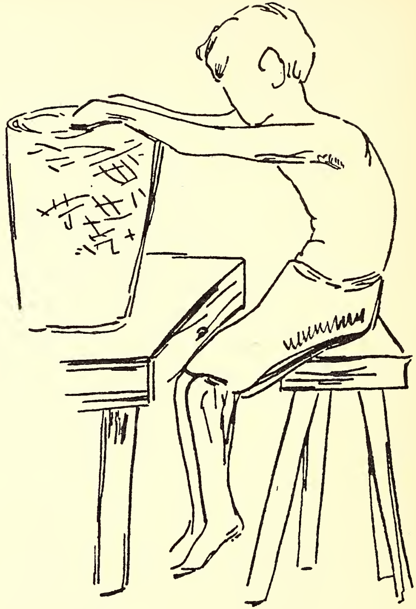


FIG. 14.—*Kindergarten Armchair* (*too small*).

Child rounds back above chair level, causing:

- Long kyphosis.
- Flat chest.
- Local spinal rigidity.



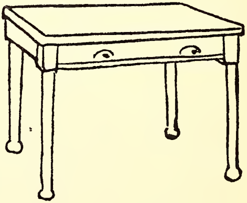


Fig. 15.—*Handicraft table with fitted Drawer and High Stool.*

Child obliged to lean forward owing to lack of knee space, causing:

Mid-dorsal kyphosis.
Flat chest.

APPENDIX 3

STATUTES AND REGULATIONS AFFECTING THE EDUCATION OF THE BLIND

All the Statutes relating to education since 1870 were codified by the Education Act in 1921. Sections 51 and 52 and 61 to 69 deal with blind children. The provisions of these sections are briefly as follows :

1. The duty of the parent to cause a blind child of 5 years of age to receive efficient elementary instruction suitable to the child (Section 51).

2. The duty of the Local Education Authorities to enable blind children resident in their area to obtain education in some school certified by the Board as suitable for providing that education, and to maintain such schools or contribute (pay fees) to such a school (Section 52).

3. The period of compulsory education for blind children extends to the age of 16 (Section 61).

4. Local Education Authorities have the same powers in relation to Special Schools as for the provision of ordinary Elementary Schools (Section 62).

5. Conditions to be observed in regard to certification of schools for blind children (Section 63).

6. Provision as to religious instruction (Section 64).

7. Liability of parents for expense of blind child's education (Section 65).

8. Saving of rights of parents for selection of school (Section 66).

9. Provision for payment by the Board of Education of aid from the Parliamentary Grant (Section 67).

10. Duty of the Board of Education to furnish particulars as to their proceedings under this part of the Act, and to give a list of schools in their annual Report to Parliament (Section 68).

11. Definition of the word "blind," i.e. "too blind to be able to read the ordinary school books used by children" (Section 69).

Provision is thus made for the compulsory attendance of all blind children at suitable schools between the ages of 5 and 16. The Board of Education Grant Regulations No. 19 are concerned with the detailed arrangements to be observed in the conduct of Special Schools for the Blind. By these Regulations children may be admitted to a Special School after the age of 2 and must be certified by a medical practitioner to belong to the type of child for which the school is designed.

The Board have interpreted the definition of "blind" in Section 69 of the Education Act as including not only children who through defective vision are unable to read school books, but also those who, while able to read, can only do so with risk of detriment to their vision. These children, who form part of the group known administratively as the partially sighted, are sometimes sent to Schools for the Blind with or without special provision for their needs, or to special schools which are confined to partially sighted children.

The further education of the blind after the age of 16 is provided under the general power conferred upon Local Education Authorities under Sub-section (1) of Section 70 of the Education Act, 1921, which requires County Councils and County Borough Councils to consider the educational needs of their areas, and to take such steps as seem to them desirable after consultation with the Board of Education to supply, or aid the supply, of higher education, and to promote the general co-ordination of all forms of education, for this purpose paying such sums as they think fit. Under this Section, conditions are provided in the Grant Regulations No. 19 of the Board of Education for the recognition of courses of instruction in preparation for a trade for blind students over the age of 16.

Blind children chargeable to Poor Law Authorities are dealt with under Section 58 of the Poor Law Act of 1930, under the following powers:

> "The Council of any County or County Borough may, with the approval of the Minister, send any poor deaf and dumb or

> blind child who is (*a*) an idiot or an imbecile, or (*b*) resident in a Workhouse or in an institution to which he has been sent by a County or County Borough Council from a Workhouse, or (*c*) boarded out by a County or County Borough Council to any school fitted for the reception of such children, whether or not the school is a certified school, but save as aforesaid, it shall not be lawful for the Council of any County or County Borough in the despatch of their functions under this Act to send any deaf and dumb or blind child to any school."

Section 39 of the Poor Law Act of 1930 gives the following powers to afford further education to blind persons chargeable to the Poor Law:

> "The Council of any County or County Borough may provide for the reception, maintenance, and instruction of any adult person in receipt of relief being blind or deaf or dumb in any Institutions especially for the reception of persons suffering from such infirmities, and may pay the charges incurred in conveyance of such persons to and from the Institutions, as well as the expense incurred in his maintenance, support and instruction therein."

The powers of Public Assistance Committees in respect of the education of the blind may, however, be modified in view of the following provision under Section 5 (1) of the Local Government Act, 1929:

> "The Council in preparing an Administrative Scheme shall have regard to the desirability of securing that, as soon as circumstances permit, all assistance which can lawfully be provided, otherwise than by way of Poor Relief, shall be so provided, and accordingly any such Scheme may declare that any assistance which can, after the appointed date, be provided either by way of Poor Relief or by virtue of any of the following Acts, as amended by any subsequent enactments including this Act, (that is to say) . . . (*g*) the Education Act, 1921, shall be provided exclusively by virtue of the appropriate Act and not by way of Poor Relief, but nothing in this Sub-Section or in any Scheme shall diminish or otherwise affect the duty of the Council under Section 34 of the Poor Law Act, 1927, to provide relief for the poor."

If, therefore, a Declaration has been made under this

Section in the Scheme of the Authority, the Education Act will be substituted for the Poor Law as the vehicle for the provision of education for blind persons. Fifty Authorities have made declarations under this Section.

In addition to the statutory powers of Public Assistance Authorities in respect of the education of the blind, further powers are given to Authorities by Section 59 of the Poor Law Act, 1930, under conditions prescribed by Articles 121–125 of the Public Assistance Order, 1930, in respect of apprenticeship of young persons generally.

GRANTS

Exchequer grants were first paid in respect of the education of children at blind institutions in 1894. The rates of grant and the regulations under which they are paid have varied from time to time. Broadly, the present system under which grants are paid by the Board of Education in respect of pupils at Special Schools, or institutions providing continuation courses (i.e. courses of training for blind persons over the age of 16), is as follows:

If the School or institution is provided by a Local Education Authority the Board pay 50 per cent. of the Authority's approved expenditure in conducting the school or course.

If the school or institution is not provided by a Local Authority, a capitation grant is paid by the Board to the Managers, calculated on the attendances of all pupils in the school or institution who have not been sent by a Public Authority acting in any capacity. In addition, the school or institution charges a fee (not exceeding the cost of maintenance and education) to each Local Authority sending pupils. The Local Education Authorities recover half this sum from the Board of Education.

The Regulations governing the payment of grant are Grant Regulations Nos. 1 and 4 (grant on expenditure by Local Education Authorities) and Grant Regulations No. 19 (direct grant to blind institutions).

APPENDIX 4

PRINCIPAL BOARD OF EDUCATION DOCUMENTS NOW IN FORCE

Circular 1275 deals with salaries of teachers in certified Day Special Schools maintained by Local Education Authorities (August 2nd, 1922).

Circular 1297 deals with the staffing of Special Schools (January 29th, 1923).

Circular 1298 deals with Local Education Authorities' contributions to Special Schools (February 9th, 1923).

Circular 1299 encloses a copy of Circular 1298 for the management of voluntary Special Schools (February 9th, 1923).

Circular 1319 deals with teachers' salaries in Residential Special Schools (December 20th, 1923).

Circular 1403—training of blind pianoforte tuners (July 1st, 1929).

Circular 1411—effect of Local Government Act, 1929, on Special Schools. Withdrawal of Board's grants in respect of cases sent by Public Assistance Committees (February 6th, 1931).

Circular 1415—alteration in rates of grant payable to voluntary Special Schools consequent on the reduction in teachers' salaries (September 1931).

Circular 1431—alteration in certificate to be used in certifying blind children (October 1933).

Administrative Memorandum No. 52—qualifications of staffs of Special Schools (March 29th, 1927).

List 42, 1936—list of Certified Special Schools.

APPENDIX 5

THE VARIATIONS IN THE COST OF EDUCATION IN BLIND SCHOOLS

The fees which may be charged by voluntary schools to local education authorities who send blind children to them for education require the approval of the Board of Education, and the Board were good enough to furnish the Committee with the list of fees which they have approved. The fees for residential schools vary from £87 15*s.* to £40 p.a., and in the case of children under 5 to £38 5*s.* In day schools, fees vary from £45 to £18 4*s.* p.a.

The Board, in approving fees, take into account the ascertained cost per head in the various schools, and these costs vary considerably. A number of factors affect the cost per head, and enumeration of some of them will indicate how complicated the situation is. The Board gave the Committee some figures which support the view that considerable variations appear in almost every item of the budgets of the schools :

Item.	Lowest cost per head. £	*s.*	*d.*	Highest cost per head. £	*s.*	*d.*
Books and stationery . .		1	3	2	9	8
Furniture, apparatus, and equipment . . .		19	1	2	13	1
Fuel, light, cleaning . .	3	17	9	6	5	1
Upkeep of buildings . .		17	2	8	17	11
Rates and taxes . . .	1	6	9	7	19	9
Boarding expenses . .	17	14	2	39	18	1

Miscellaneous expenses may be included in this last item, as schools present their accounts with some variations, and frequently group these together.

Apart from these variations, the large item of salaries of teachers varies considerably. In provided schools, teachers are paid at the appropriate Burnham scale. As these vary throughout the country, differences in salary bills are inevitable. In voluntary schools, teachers are generally paid salaries which approximate to the appropriate Burnham scale, and much the same variations, therefore, appear.

One would expect, *a priori*, that the larger the school, the smaller the cost per head, but this is far from being generally true. The large school often provides a more generous staff, more specialists, better equipment, higher standard of living, and greater efficiency all round. Even in the case of large schools, there are great differences in the cost per head.

Vacancies in a school clearly raise the cost per head, and with the shrinkage of the numbers of blind children of school age, this factor might be regarded as important, were it not for the complication that in a number of schools partially sighted children are taught as well as blind children. A further complication is involved in the fact that the prescribed number of children per teacher is greater for the partially sighted than for the blind.

It should be noted that great variation in the cost per head is found throughout the whole field of education, and is not confined to schools for the blind. It would not be right to conclude that a school with a low cost per head is more efficiently administered than a school with a high cost per head.

APPENDIX 6A

FORM OF HALF-YEARLY PROGRESS REPORT

SCHOOL ....
LOCAL EDUCATION AUTHORITY..

Name of Pupil..
Age........................Date of Admission...............................
1. Intelligence..
....
2. Special Aptitudes or Weaknesses, with special reference to musical or manual ability...
....
3. Progress in schoolroom subjects, with special reference to strong or weak subjects...
....
4. Physical Development and General Activity..................
....
5. General Health..
....
Height : Gain during period................................
Weight : Gain or loss during period....................
6. Character, Conduct, and Social Characteristics................
....
7. Suitability for training after the age of 16 years (to apply to children over 14 years of age only)............................
....
8. Remarks..
....
....
....

Signature of Class Teacher..........................
Signature of Head Teacher..........................
Date ....

APPENDIX 6B

PROGRESS REPORT OF BLIND PERSON UNDER TRAINING, FOR PERIOD ENDING	Pupil's Name.................................. Training Institution......................... Responsible Local Authority...........

---

1. Pupil's Address...
2. Date of birth..
3. Date of commencement of training.....................................
4. (*a*) Course of Training (if for any reason course is limited to a particular section of a trade, please give details of that section) ....
   (*b*) Previous course of training, if any.................................
   (*c*) Will trainee enter (*a*) Workshop..................................
   or (*b*) Home Workers' Scheme...............
5. Degree of vision...
6. General Health...

---

7. Progress in Training :—
   (*a*) Quality of work produced.......................................
   (*b*) Speed of work..
   (*c*) Independence of supervision...................................
8. Conduct ....
9. Attendance (with reasons for prolonged absence, if any)........
....

---

10. Is it likely that the pupil will, after the normal course of ....years in all, become proficient ?.............................
11. If the answer to the above question is "No," do you recommend :
    (*a*) Withdrawal from training ?.............................
    or (*b*) Transfer to another course of training ? (If so, state course recommended)..........................
    or (*c*) If the pupil is nearing the end of his course, an extension of the course (and if so, for how long ?) ....
    ....
12. Remarks...
....
....

Date..................Signature ....
Head of Training Department.

APPENDIX 7

SUGGESTED DIET-SHEET FOR YOUNG BLIND CHILDREN

One hardish biscuit on waking.

Breakfast	Cocoa (made with milk), 7½ oz. Toast and dripping, alternating with toast and butter.
Mid-morning	Half an apple (uncooked) or half an orange, or lettuce leaves or raw tomato.
Dinner	Beef or mutton (minced for younger children). Greens. Gravy. Potato. Milk pudding and fruit juice, *or* baked apple. Fish (cod) twice weekly, rabbit occasionally, chicken once a fortnight, soup made from bones and vegetables, milk puddings (varied), fruit juice (varied, but chiefly prune juice), steamed puddings weekly, with different sauces.
Tea	Cocoa (made with milk), 7½ oz. Bread and butter, toast (for younger children), and honey or jam. One biscuit or piece of cake. Occasionally bananas (mashed for younger children), or grapes. Occasionally half a boiled egg.
Supper	Hot milk only at bedtime.

APPENDIX 8

LIST OF WITNESSES

Dr. F. Alexander.

Dr. E. Allen, Director Emeritus, Perkins Institution for the Blind, Mass.

Mrs. Bayliss, East Anglian School for Blind and Deaf Children.

*Miss Bell, formerly on staff of Royal Normal College for the Blind.

W. H. Bennett, Esq., Ministry of Health.

Miss Bramhall, Ministry of Health.

G. C. Brown, Esq., M.A., Headmaster, Worcester College for the Blind.

Miss Bryan, formerly Headmistress, Enfield Road L.C.C. School for the Blind.

Mrs. Campbell, formerly Principal, Royal Normal College for the Blind.

*Miss D. Cleaver.

*J. A. Clydesdale, Esq.

*W. Coates, Esq.

*J. R. Emblen, Esq., National Institute for the Blind.

Miss N. Catty, formerly lecturer, Goldsmiths' College.

Colonel Forbes, Scottish Education Department.

†L. Hardcastle, Esq., Blenheim Walk Home and School for Blind and Deaf Children, Leeds.

*Miss A. Lidington.

Miss E. McKay, American Foundation for the Blind.

Miss Monk, Headmistress, Chorleywood College for Girls with Little or No Sight.

Miss Morley, Queen Alexandra Kindergarten, Birmingham Royal Institution for the Blind.

*I. G. Osborn, Esq., London Society for Teaching and Training the Blind.

* Blind. † Partially sighted.

R. C. Phillips, Esq., Headmaster, Royal Victoria School for the Blind, Newcastle.

†R. W. Plear, Esq., Linden Lodge L.C.C. School for Elder Boys.

M. Priestley, Esq., Royal Midland Institution for the Blind, Nottingham.

*B. Purse, Esq., National Institute for the Blind.

*Miss Jean Robinson.

*A. Siddall, Esq., Superindent home teacher, Rochdale.

Dr. Simpson, Scottish Education Department.

Miss Thyrza Smith, H.M.I., Board of Education.

S. W. Starling, Esq., Incorporated Association for Promoting the General Welfare of the Blind.

*R. T. Stephenson, Esq.

S. E. Stevens, Esq., Superintendent, School for the Indigent Blind, Liverpool.

Miss E. Sutton, London Society for Teaching and Training the Blind.

*C. F. Tivey, Esq., Henshaw's Institution for the Blind, Manchester.

*T. H. Tylor, Esq., Balliol College, Oxford.

E. L. Turnbull, Esq., Board of Education.

Miss Vulliamy, C.S.M.M.G.

Dr. Lilian Wilson, Board of Education.

* Blind. † Partially sighted.

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AMERICAN FOUNDATION FOR THE BLIND
15 WEST 16th STREET
NEW YORK, N.Y. 10011